

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 77 WEST JACKSON BOULEVARD CHICAGO, IL 60604-3590

FEB 1 5 1995

REPLY TO THE ATTENTION OF:

R-19J

Mr. John M. Heckard Vice President Vector Group, Inc. 1118 Ferris Road Cincinnati, Ohio 45102

Dear Mr. Heckard:

In a letter dated January 24, 1995, M.C. Durfee, Program Manager of Vector Group, Inc. (Vector) described general procedures to decontaminate the primary and secondary shredders and a drum crusher at the CWM Chemical Services, Inc. (CWM-CS) site at 11700 South Stony Island Avenue in Chicago, Illinois, (Enclosure 4). After decontamination, the primary shredder and possibly the drum crusher are intended to be transferred to the Ecova Incinerator, Kimball Thermal Oxidation Facility, in Kimball, Nebraska, for use in a RCRA waste handling operation.

This letter grants approval to Vector to decontaminate the shredders and the drum crusher at CWM-CS in accordance with the general cleaning procedures in Mr. Durfee's letter and in accordance with the additional decontamination and sampling procedures, which are included with this letter as Enclosures 2 and 3, respectively.

In addition, Vector must also follow all applicable conditions of its "Approval to Dispose of Polychlorinated Biphenyls (PCBs), Amended" (hereinafter referred to as nationwide approval [Enclosure 1]) dated March 17, 1994, issued by the United States Environmental Protection Agency (U.S. EPA) Headquarters in Washington, D.C. The applicable conditions of the nationwide approval are noted in Enclosure 2.

This approval is being granted based on a consideration that the demonstration tests associated with Vector's nationwide approval were audited and inspected by representatives of U.S. EPA Headquarters, during which the efficacy of the Vector process was verified. In addition, this approval is based upon U.S. EPA's conclusion that Vector's PCB disposal activities, as demonstrated to U.S. EPA Headquarters, did not present an unreasonable risk of injury to public health or the environment.

US EPA RECORDS CENTER REGION 5



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Representatives of the U.S. EPA may be on site during the decontamination to observe the procedures and verify results by splitting samples, where applicable.

It is your and Vector's responsibility to ensure that all applicable provisions of the TSCA and the Federal PCB regulations are followed. This authorization does not relieve Vector of the responsibility to comply with all other Federal, State and local regulations and ordinances for the decontamination of the above equipment. In addition, prior to commencing decontamination, Vector shall obtain any necessary Federal, State or local permits or approvals.

Prior to transferring either shredder or drum crusher off site, or prior to reuse of the equipment in a non-PCB process, a summary of the post decontamination sampling results should be submitted to Tony Martig, of my staff, at the above address, in the PCB Control Section/SP-14J.

Please contact Mr. Martig at (312) 353-2291 if you have any questions pertaining to this authorization.

Sincerely yours,

Valdas V. Adamkus

Regional Administrator

Enclosures

bcc: Dennis D. Grams, Regional Administrator
U.S. Environmental Protection Agency, Region 7

Mary Gade, Director
Illinois Environmental Protection Agency

Randolph Wood, Director Nebraska Department of Environmental Quality

John Connolly, General Manager CWM Chemical Services

Paul Ahearn, Manager, Regulatory Compliance Clean Harbors

bbcc: W. Lue, EPA, Headquarters/7404 (w/Encl.)
T. Martig (w/Encl.)

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ENCLOSURE 1

NATIONWIDE APPROVAL

BECEIVED



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

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U. S. EPA REGION 5 OFFICE OF REGIONAL ADMINISTRA

PCB CONTROL SECTION US EPA, REGION V

OFFICE OF PREVENTION, PESTICIDES AND TOXIC SUBSTANCES

Mr. John M. Heckard Vice President Vector Group, Inc. 7456 Jager Court Cincinnati, Ohio 45230

Dear Mr. Heckard:

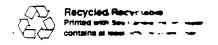
Enclosed is a document entitled "Approval to Dispose of Polychlorinated Biphenyls (PCBs), Amended. " The enclosed approval authorizes Vector Group, Inc. (Vector) to remove PCBs from natural gas pipeline pipe (up to 8 inches in diameter), appurtenances, and air receivers. The Office of Pollution Prevention and Toxic (OPPT) has reviewed results from the Vector's demonstration test report submitted on September 22, 1993.

The demonstration test for disposal of PCB contaminated water occurred from July 26-30, 1993. The results from the demonstration indicated that Vector can successfully clean natural gas pipeline pipe (8 inch or less diameter), appurtenances and air receiver tanks to levels of between 0.1 and 1 microgram per cm2.

EPA had audited and inspected the Vector operations during the demonstration and verified the efficacy of the Vector process. EPA certified chemical analysis of the on-site laboratory. During the July 26-30, 1993 demonstration, split wipe samples of the natural gas pipeline pipe and appurtenances were collected for analytical confirmation by Midwest Research Institute (MRI).

The approval is based upon the ability of the Vactor Procedures to safely and effectively perform the above-mentioned disposal activities on facilities which had historically contained PCB condensate without such disposal activities resulting in environmental release of PCB containing condensate. In addition, the approval is based upon the Agency's conclusion that the F13 disposal activities as demonstrated to EPA and performed according to Vector Procedures do not present an unreasonable risk of in iny to public health or the environment.

The Vector PCB removal approval to operate nationwide state. become effective upon signature of the Director of the Character. Management Division of the Office of Pollution Prevent: 1 Toxics (OPPT) and shall be effective until January 30, 1993 approval may be withdrawn, or further conditions may be adde1:



at any time EPA has reason to believe that operation of the Vector Procedures present an unreasonable risk of injury to public health or the environment. EPA reserves the right to withdraw this approval or impose further conditions as the result of future EPA rulemaking with respect to PCBs. Moreover, violation of any condition included as part of this approval may subject Vector to enforcement action and/or suspension or revocation of the approval.

It is the responsibility of Vector Group, Inc. to comply with all applicable provisions of TSCA and the Federal PCB Regulations in cleaning and removing the natural gas pipeline, metering stations and compressor stations as specified in the approval. Violation of any applicable provisions or conditions of the approval, EPA's determination of misrepresentation of material fact in the application and support material, or demonstrations of past willful and knowing violations of environmental regulations may be cause for recision of this approval. Furthermore, this approval does not relieve Vector of the responsibility to comply with all other applicable Federal, State and local regulations and ordinances for transportation, siting, operation, disposal of wastes, and maintenance of the Vector Procedures.

EPA reserves the right to inspect Vector Group Inc. natural gas pipeline cleaning, metering stations and compressor station PCB removal projects and the records which Vector is required to maintain under the Federal PCB Regulations and this approval during operation and at other reasonable times.

Vector has filed with the Director, Chemical Management Division, a closure plan, closure cost estimates, and financial assurance mechanism. EPA has not completed its review of these documents. Following EPA review, should Vector receive a Notice of Deficiency for any or all of these documents, Vector shall take thirty days to satisfactorily address all deficiencies or thirty days to satisfactorily address all deficiencies or thirty days of receipt by Vector of a Notice of Acceptance for the closure plan, closure cost estimates, and financial assurance mechanism, Vector shall have its financial assurance mechanism in place in full force and effect or the approval.

automatically suspended on the thirty first day. Vector may request an extension from OPPT for either of these deadlines. EPA considers financial assurance a critical condition in this approval.

Please contact John Smith of my staff at (202) 382-3964 if you have any questions pertaining to this approval.

Sincerely,

John W. Melone, Director Chemical Management Division

Enclosure

cc: Regional Administrators

Regions I - X

Regional PCB Coordinators

Regions I - X

Chris Zerby,

Federal Energy Regulatory Commission

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

IN THE MATTER OF

APPROVAL TO DISPOSE OF

VECTOR GROUP, INC.

POLYCHLORINATED

1118 FERRIS RD.

BIPHENYLS (PCBs),

CINCINNATI, OH 45102

AMENDED

AUTHORITY

This approval is issued pursuant to Section 6 (e) (1) of the Toxic Substances Control Act of 1976 (TSCA), Public Law No. 94-469, and the Federal PCB Regulations, 40 CFR 761.60 (e) (48 CFR 13185, March 30, 1983). Background and Findings related to this approval are attached as Appendices I and II.

EFFECTIVE DATE

Vector Group, Inc. (Vector) is the sole owner and operator of a solvent extraction process using Vector Group Mobile PCB Decontamination Units (VGMDU), where PCBs are removed from items and equipment including metallic piping and air compressor systems, using one or more mobile units. Pursuant to 40 CFR 761.60 (e) and when operated in accordance with the conditions of this approval, EPA finds that the Vector process is equivalent to an approved incinerator for the disposal of PCBs in metallic pipe, air receivers and associated air compressor appurtenances and that use of the VGMDU process does not pose an unreasonable risk of injury to human health or the environment.

This nationwide approval to decontaminate compressed air systems and appurtenances and metallic pipe appurtenances and equipment shall become effective on the date of signature by the Director of the Chemical Management Division of the Office of Pollution Prevention and Toxics and shall expire January 30, 1998.

DEFINITIONS

"Analytical data" means (a) a formal report from a chemical analysis laboratory or (b) appropriate chemical instrument printouts with appropriate controls, standards, and written instrumental operating parameters and conditions, or (c) a statement that the "assumption" rule has been used. Technical judgement or experience is not considered analytical data.

"Appropriate local jurisdiction" means the incorporated city where the Vector Group Mobile PCB Decontamination Unit (VGMDU) may be operated, or the county, if the VGMDU will be operated outside the boundary of an incorporated city.

"Appurtenances and or Equipment" means any equipment other than air compressors, receiver tanks and piping. Examples of appurtenances are valves, regulators, disassembled air compressors, tools and other parts and fittings.

"Business hours" means 8:00 a.m. to 5:00 p.m. local time on weekdays except United States Government Holidays.

"Cleaning Agent" means either a 5% solution of sodium hydroxide, a 2% solution of Cimclean 30_{TM} , or a 2% solution of LP 969_{TM} .

"Day" means a calendar day, unless otherwise specified.

"Disposal" means any removal of PCBs from compressed air systems and metallic pipe and then treating or sending off any type of PCB wastes or materials generated during the VGMDU process.

"Duplicate analysis" means two gas chromatographic analyses of the analyte prepared from one wipe sample.

"Frequent site changes" means site changes at a rate of more than once per week.

"Job" means all Vector disposal operations for a single customer within fifty road miles of a central location. A job may consist of Vector disposal operations at several different sites for a single customer.

"Lifetime exposure risk" means the risk to an average adult individual who is exposed to a stated average concentration of a toxic material daily over the course of a 70 year lifetime.

"Lost time injury" or "Lost workday injury" means an injury related to the operation of the VGMDU process which results in an employee not performing his/her normal assignments during the workday and/or any successive workday(s) following the day of the injury.

"Major modification" means any change to capacity, design, or efficiency of the VGMDU process, change of waste type, or any

other changes significantly affecting overall performance or environmental impact.

"Metallic Pipe or Metallic Piping" means any piping constructed from metallic materials that is contaminated by PCBs.

"Minimal" with regard to an amount of PCB wastes means less than ten percent (10%) of total wastes treated.

"Mobile operations" means those operations where the VGMDU remains at a site for less than 180 consecutive days.

"Operations" means the VGMDU process of removing PCBs, treating spent cleaning solutions on site, and sending off PCBs for disposal, including set up and take down of the VGMDU as well as actual treatment.

"OPPT" means the Office of Pollution Prevention and Toxics (TS-792); (202) 260-3815; Operations Branch (TS-798); (202) 260-3933; Facsimile (202) 260-1724.

"PCB" means polychlorinated biphenyls as defined in 40 CFR 761.3.

"PCB release" and "PCB spill" have the same meaning as "spill" as defined in EPA's PCB Spill Cleanup Policy in 40 CFR 761.123.

"Permanent operations" means those operations where the VGMDU remains at a site for 180 consecutive days or longer.

"Process Failure" means the inability of the VGMDU to remove PCBs from compressed air systems and metallic piping and appurtenances.

"Site" means the geographically contiguous property unit (such as a single manufacturing plant) at which the Vector PCB disposal operations are conducted. More than one compressed air system or pipe segment may be serviced at a single site.

"Site location" means a street address or a directional description which would allow a site to be found by an EPA inspector.

"Year" means 365 days.

CONDITIONS OF APPROVAL

1. Advance Notification

a. Overview

Vector shall provide a nonconfidential, advance written notification of intent to operate to be received by the addressees (as described below) prior to the conduct of a permitted PCB disposal activity. The addressees shall include, at a minimum: the Chief of the PCB Disposal Section in EPA Headquarters' Office of Pollution Prevention and Toxics (Mail Code: TS-798), the appropriate EPA regional office, the appropriate state agency, and the appropriate local jurisdiction.

The type of written advance notification requirements is dependent upon the length of time a VGMDU is at a single site. The two categories are listed below and advance written notification requirements follow:

Mobile Operations

Permanent Operations

The information which must be included in the advance written notification for each category is described in sections 1.b.-1.d. below. Advance notification requirements may be waived at Superfund sites according to 121 (e) of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) and its implementing provisions at (40 CFR 300.400 (e).

b. Mobile Operations

- (1) The following information must be included in a 30-day advance written notification to the addresses required to be notified under 1.a. The information provided for public information purposes and for facilitating scheduling of government compliance monitoring and oversight of PCB disposal operations
 - A. Company identification: Vector's and climinates including primary individuals names and telephone numbers.
 - B. Names, titles, addresses, and telephone numbers of the addressess required to be not:: by 1.a.

- C. The nature of the PCB disposal activity, including estimates of the amount and type of PCB material (number of air receivers, appurtenances and piping to be treated) and estimates of the surface and/or condensate concentration of PCBs on and/or in (respectively) the material. The estimates shall be based on any one or combination of the following:
 - i. Analytical data or the results of analytical data provided by the customer; or
 - ii. Vector analytical data.
- D. The site location(s) and a telephone contact(s).
- E. The time(s) and date(s) that the PCB disposal activity is scheduled to take place.

An acceptable sample form for the 30-day advance written notification of intent to operate under mobile operations is included as Appendix III A.

- (2) For Vector operations under Mobile Operations where there are frequent site changes, the following additional notification is required:
 - A. Every week Vector shall provide by telephone facsimile transmission, a two-week activity schedule to the OPPT and the EPA regional contact for each region where a PCB disposal activity will occur. This two-week activity schedule shall include for each job:
 - i. EPA region where the VGMDU will be located;
 - ii. Most probable date that the VGMDU will be performing PCB disposal activities;
 - iii. The time(s) and date(s) the PCB disposal activity is scheduled to take place:
 - iv. The expected number of sites; and
 - v. Either:
 - (a) the county or counties where PCB disposal activities will occur, or

(b) a notice that the VGMDU will operate within a 50-mile radius of a specific location identified by a client telephone contact and client address.

An acceptable sample form for the two-week activity schedule under mobile operations is included as Appendix III B.

B. If a change in the most probable operating date or a change in scale for a job is made more than 2 days in advance of the most probable operating date, as stated in the most recent two-week activity schedule transmitted to EPA, Vector must send a telephone facsimile message noting the change to the appropriate EPA regional contact at least 2 days in advance of the most probable operating date, as stated in the two-week activity schedule.

If the change in the most probable operating date or the change in scale is made 2 days or less in advance of the most probable operating date, as stated in the most recent two-week activity schedule transmitted to EPA, then the next scheduled telephone message update shall include the change.

- C. Vector shall operate a recorded message system accessible 24 hours a day by EPA Regional Compliance Monitoring staff and OPPT staff. The recorded message must include the following information for each of VGMDU's operations in the United States:
 - i. site location (street address or directional description), client contact and phone number;
 - ii. scheduled completion date of current
 job; and
 - iii. company identification and scheduled start date of next job.

The message shall be updated daily between 7:30 a.m. and 8:30 a.m. EST/EDT and between 4:30 p.m. and 5:30 p.m. EST/EDT on weekdays (except fir official U.S. Government holidays). If this recorded message is considered confidential business information, the message may be accessed by a code distributed to the EPA regional continuant of the CPT officials below.

Samples of acceptable forms for the required notifications under Mobile Operations are included in Appendix III. Other forms providing equivalent information may be used.

EPA REGIONAL CONTACTS

Kim Tisa, Region I(617) 565-3468(617) 565-3279Dan Kraft, Region II(201) 321-6788(201) 321-6669Charlene Creamer, Region III(215) 597-3156(215) 597-4651Stuart Perry, Region IV(404) 347-1681(404) 347-3864Priscilla Fonseca, Region V(312) 886-2591(312) 886-1334Donna Mullins, Region VI(214) 655-2136(214) 655-7244Doug Elders, Region VII(913) 551-7065(913) 551-7020Dan Bench, Region VIII(303) 293-1732(303) 293-1443Russ Kemmerer, Region IX(415) 744-1074(415) 744-1116	Name, Region	Telefax Number	Contact Number
(200/ 110	Kim Tisa, Region I Dan Kraft, Region II Charlene Creamer, Region III Stuart Perry, Region IV Priscilla Fonseca, Region V Donna Mullins, Region VI Doug Elders, Region VII Dan Bench, Region VIII	(617) 565-3468 (201) 321-6788 (215) 597-3156 (404) 347-1681 (312) 886-2591 (214) 655-2136 (913) 551-7065 (303) 293-1732	(617) 565-3279 (201) 321-6669 (215) 597-4651 (404) 347-3864 (312) 886-1334 (214) 655-7244 (913) 551-7020

c. <u>Permanent Operations</u>

Vector must submit an advance written notification of permanent operations to the addressees at least 180 days in advance of the proposed Permanent Operations at a site. When a VGMDU is to be operated at a site for 180 consecutive days or more, the following information must be included in the notification and verified by EPA to conform to the informational requirements before the 180-day review period can begin. This advance written notification shall include a site evaluation and must include the following:

- (1) All information required under items 1.b. (1) through (5) of Mobile Operations.
- (2) Additional information presented below:
 - A. estimates of fugitive emissions of PCBs and any other hazardous materials;
 - B. amounts of waste generated during the entire operation and how that waste will be disposed;
 - C. plans of action in case of an emergency (including arrangements with local fire fighters, law enforcement personnel, and public health officials);

- D. site-specific spill prevention control and countermeasures (SPCC) plan or containment installations and procedures; and,
- E. site cleanup or restoration procedures and copies of any bonds which may be required by a state or local authority or by the client for the Vector operations.

(3) Details of the Site Evaluation

The following information must be submitted to OPPT and the appropriate EPA region as part of a notice of intent to operate a VGMDU at a site for 180 consecutive days or longer. A public notice will not be published until a complete submission of these requirements has been received and approved by EPA.

There are a number of details which were submitted to EPA as part of the original PCB disposal permit application which must be updated or revised. All of these details are directly or indirectly related to the site of operations.

A. Project Personnel

A list of names and an organizational chart, brief job description, and responsibilities for all staff to be employed by the permittee at the proposed site. In addition, names, mailing addresses, and telephone numbers of primary Vector contacts with EPA, such as environmental affairs managers or government liaison contacts. Job qualifications and training, including the time, frequency and content, must be included.

B. Facility Description

The facility description shall include details of the disposal operations as they apply to the physical layout at the disposal site. To be included are (1) a site layout, to scale, f the location where operations will occur, and 1 the location of safety equipment, including but not limited to fire protection equipment, disposal equipment, supplies, waste handling equipment, waste loading and unloading points for transportation, flood proofing protection structures, security structures.

If the disposal operation will be at a previously developed site, in addition to the above requirements, other site modifications must be described and justified. Buildings for personnel, construction, maintenance and laboratories are exempted, unless there are discharges from operations of a VGMDU to the environment. Laboratory vents, sewer discharges from the laboratory or any area that may be associated with any contact with PCBs or any hazardous waste handled or generated as the result of PCB disposal must be discussed. Also, discussions of all storage facilities and their containment, VGMDU process water systems, and other waste stream processing shall be included.

C. Disposal Activities to Be Conducted On-Site

A summary of the VGMDU process operations which are described in detail in the original permit application shall be submitted, not to exceed one typewritten single spaced page. permittee shall discuss activities and the amount of time involved in setting up and taking down disposal operations of the MDU at the site. the permittee shall provide a discussion of: monthly and annual amounts and concentrations of waste; amounts and concentrations of PCBs and other hazardous materials stored on site; amounts and concentrations of contained, controlled, and fugitive emissions of toxic and non-toxic materials and how contained materials will be disposed of; proposed hours of operations; and expected duration of disposal activities at the site.

D. Safety Measures

The permittee must describe systems and, r structures for the detection and/or containment : leaks and hazardous wastes/by-products must be described, including VGMDU process shutdowns resulting from automated monitoring of process emissions. A brief discussion of the automatic process controls, such as those which control extreme pressure fluctuations or departure from and action plans for all other emergency equipments shall be provided. Maintenance plans and schedules shall be provided. Safety and/or quality control/quality assurance inspection schedules, procedures, and recordkeeping must detailed.

E. Emergency Preparedness and Contingency Plans

Emergency preparedness plans must be submitted to local authorities and approved by the EPA region. These plans shall include (1) exactly what actions take place for each level of problem, (2) the names of the persons responsible for handling expected problems, and (3) facility personnel names and appropriate phone numbers for 24-hour a day contact in the event of an emergency. Frequent problems and reasonable worst case problem scenarios such as: spills during VGMDU processing, storage, and transportation; fire; floods; and equipment malfunction resulting in personal injury must be addressed. The information shall include (1) names and phone numbers of fire, police, medical emergency contacts, and (2) training sessions, documents, or other information provided to these services.

F. Transportation Routes and Volumes to be Transported to the Site

Transportation route information shall be detailed if such routes include any roads other than interstate highways. Information shall include residential or commercial areas associated with the roads to be used by hazardous waste transporters. Information on the on-site and offsite storage of materials (including but not restricted to locations, brief description of the release control/containment measures at the storage facility, and the estimated time to be stored at the location), shall also be listed.

G. Financial Assurance and Closure

The permittee shall summarize the financial assurance and closure provisions from the permit application including what situations are covered by insurance or other financial assurance and the amount of the assurance. Additional financial assurance and closure provisions for the time of extended PCB disposal operations at the site must be described in detail.

H. Exposure Assessment

An exposure and risk assessment shall be provided for activities included in normal VGMDU operations and in the event of reasonable worst case accidents/problems. The exposures shall

include those resulting from: storage, contained and fugitive emissions, handling and processing PCBs and other hazardous waste/process materials, operation of industrial equipment and transportation related releases such as spills and collisions.

The information shall include an assessment of risk to the public from:

- lifetime exposure to VGMDU operations;
- ii. the transport of PCB waste from the site; and,
- iii. on-site storage of PCB waste for disposal.

Situations which are not considered reasonable worst case situations are a double tornado, a terrorist attack, a nuclear strike, a plane crash into the facility, a meteor strike, and damage from an earthquake when there is not an active major geological fault near enough to expect major plant facility damage and release of PCB material.

(4) Public Participation

Vector shall provide a public notice in the local newspaper initiating a 30-day comment period for public review of appropriate permit related documents (such as the sanitized non-confidential business information) permit application, any existing PCB disposal permit, any existing draft revised PCB disposal permit, and the site evaluation). The notice shall also advise that, if EPA determines that there is sufficient public interest, a public meeting will be held on a specified date and at a specified place and time not more than 45 days after the initial public notice.

After Vector has given the EPA regional office, the state agency, and the local jurisdiction a notice of intent to operate at a site for at least 180 consecutive days or more, and once OPPT and the local EPA region are satisfied that the site specific information submitted in this notice meets the requirements set forth in paragraphs (1), (2) and (3) above, a 180-day public notification and review process shall begin. A sample notification is attached as Appendix III D.

Based on the comments and questions received during the 30-day comment period, the EPA region will determine whether a public meeting is necessary. The public meeting shall be held: (a) to discuss comments made by the public during the 30-day comment period and notification for the public meeting; (b) to allow the public to make comments on the proposed operations and site; and (c) to allow the public to ask questions of EPA representatives on the proposed operations.

The public meeting will be hosted by the OPPT. OPPT and the EPA region may collectively determine what the schedule and the agenda for the public meeting shall be.

Not more than 150 days after the close of the public comment period. EPA shall make a decision on the authorization of Permanent Operations and on what additional conditions, if any, shall be imposed on the Vector Permanent Operations. The decision will be based on review of comments during the 30-day comment period and comments made during the public meeting. The decision could be that Vector may begin operations without additional permit conditions, or the decision could be made to require additional site-specific permit conditions which must be met before Permanent PCB Disposal Operations may begin at the site.

d. Requirements for Changing from Mobile Operation Mode to Permanent Operation Mode

Whenever a VGMDU originally projected to be located at a single site for less than 180 consecutive days as Mobile Operations, at some point before 180 consecutive days into the operations Vector determines that the VGMDU will be located at the site for 180 consecutive days or longer, Vector must proceed as follows:

- (1) Vector must immediately provide written and telephone notification of this change to the EPA Headquarters' Office of Pollution Prevention and Tixios (OPPT) and the appropriate EPA regional office.
- (2) Upon submission of this notification, Vector stall cease PCB disposal operations after the 180th consecutive day unless Vector provides OPPT and the -: A regional office a site evaluation, which includes all information prescribed in sections c.(1) (3) above. The information must include updated material for operation in question, including any modifications. allow EPA to consider operations for the time per: 1 beyond the 180 consecutive days.

- (3) Upon review and acceptance of the site evaluation, Vector must provide for public notice of the applications for approval and a 30-day comment period along with an opportunity for a public meeting or hearing as described in section 1.c.4 above.
- (4) When the comment period is concluded, OPPT and the regional office will determine, in its discretion, that operations may proceed beyond 180 consecutive days. EPA will notify Vector in writing of its approval to operate beyond 180 consecutive days.

2. Agency Approvals or Permits

Prior to commencing operations, Vector shall obtain any necessary Federal, State or local permits or approvals. During the course of operations, Vector shall comply with all conditions and requirements of such permits or approvals. Copies of such permits shall be forwarded to the Chief, PCB Disposal Section (TS-798) EPA Headquarters. Waste materials containing PCBs in the concentration range of approximately 200 ppm of PCBs may also contain levels of hexachlorobenzene at levels regulated for disposal under the Toxicity Characteristic Revisions (55 Federal Register, 11796, March 29, 1990 of the Resource Conservation and Recovery Act (RCRA) regulations.

This Approval does not shield Vector from all applicable Federal, State and Local regulations and ordinances.

3. Authorized Use of the Vector Mobile PCB Decontamination Unit

Vector is authorized to use its Mobile PCB Decontamination Unit (VGMDU) including its extraction solvent process to clean compressed air systems, which include air receiver tanks, the piping between the compressor and the air receiver tanks; the piping between the receiver tanks and other compressor station equipment such as instruments and tools driven by compressed air; disassembled air compressors; and miscellaneous valves, controllers and fittings associated with compressed air system In addition, Vector is authorized to use its VGMDU to clean metallic piping used for purposes other than compressed air systems if the metallic piping is 36 inches in diameter or less. The use of the VGMDU process to clean compressed air systems and associated parts, and other metallic piping is an alternative to disposal of the systems in a TSCA-approved incinerator or TSCAapproved landfill. Decontamination criteria shall be according to either performance- based procedures as described in Condition 5 or measurement-based conditions as described in Condition 6 below.

4. <u>Disposal/Reuse of Decontaminated Material</u>

Air compressor systems and appurtances and metallic pipe which have been decontaminated according to the measurement based conditions described in Condition 6 below, and which have been wipe sampled according to Condition 6 and the wipe samples analyzed according to approved chemical analysis methodologies shall be placed into one of the disposal categories below based on the analytical results.

Air compressor systems and appurtances and metallic pipe which have been decontaminated according to the performance-based conditions described in Condition 5 shall be placed into one of the disposal categories below based on the completion of the performance-based procedures.

A. Disposal/Reuse of metallic pipe and appurtenances having PCB surface concentrations of equal to or greater than 1 ug/cm².

Metallic pipe and appurtenances, removed from service and having surface concentrations greater than 1 ug/cm² as determined by EPA approved, statistically based wipe sampling are regulated for disposal. Regulated, removed PCB pipe and equipment shall be stored and disposed of according to 40 CFR 761.65 and 761.60.

B. Disposal of metallic pipe and appurtenances having PCB surface concentrations between 0.1 ug/cm^2 and less than 1 ug/cm^2 .

Metallic pipe and appurtenances which has been verified to meet the designated 1 ug/cm² cleanup level, but is above 0.1 ug/cm², shall be unregulated for disposal, but authorized for reuse and distribution in commerce only in a natural gas pipeline system and/or a compressed air system or as described below:

- any transport of hydrocarbons, natural gas, chemical, or petrochemical products.
 - as a casing to provide secondary containment under highways, railroads, or other transportation systems
 - industrial structural material such as fence posts. sign posts, gate posts, cross structures, and bridge supports.
 - -temporary flume pipe used during construction.
 - Equipment skids.

- permanent culverts in non continuous flow situations not to exceed 80 feet in length.
- sewage service with written consent of POTW.
- -steam service
- irrigation systems less than 200 miles in length where pipe is less than 20" in diameter.
- enclosed compressed air systems.
- C. Disposal of metallic pipe and appurtenances having PCB surface concentrations of less than 0.1 ug/cm².

Metallic pipe and appurtenances having surface level concentrations below 0.1 ug/cm² are not regulated for disposal or distribution in commerce and reuse except where those uses are associated with food, feed or drinking water.

Failure to clean any regulated metallic pipe, compressed air system, or its components to the 1 ug/cm² level, or to the 0.1 ug/cm² level in a measurement-based procedure, subjects the equipment to TSCA use, distribution in commerce, and disposal requirements based on the measured concentration of PCBs prior to decontamination. However, an EPA consent agreement/decree may require/allow surface levels or residual PCB levels other than those authorized by this approval. The procedures for determining whether or not the VGMDU process has met the specific surface level requirements for a measurement-based procedure are described in Condition 6.

5. <u>Performance-Based Cleaning of Compressed Air Systems and Metallic Pipe</u>

In Condition 3, the VGMDU is authorized to use its extraction solvent process to clean compressed air systems and metallic pipe and associated equipment. The VGMDU was demonstrated to clean the above mentioned equipment to levels of 10-100 microgram per 100 square centimeters under specific operations conditions shown below. The regulatory status of such equipment is described under Condition 4.

a. Air Receiver Tanks

The VGMDU process operated as below is approved to clean air receiver tanks. The performance of the VGMDU operated as below has cleaned surfaces to less than 100 micrograms per 100 square centimeters, which is the same as one microgram per square centimeter (1 ug/cm²) but not less than 10 micrograms per 100 square centimeters (0.1 ug/cm²)

Approved operations for air receiver tanks, which have been demonstrated to achieve surfaces cleaned to between 0.1 to 1 ug/cm^2 , shall include the following equipment operating at the following limits:

Equipment: Sellers Nozzle
Model Number: 360-2
Maximum Throw Distance - 20 feet

The cleaning effectiveness of the Sellers nozzle is dependent on the pressure (psi) of the supplied cleaning agent, flow rate (gpm) of the supplied cleaning agent, the diameter of the nozzle orifice, the distance from the nozzle to the surface being cleaned, and the length of time (cycles) the nozzle is operated. The Sellers nozzle was demonstrated with the following parameters:

Diameter of nozzle aperture: 5/16 inch (7.9 mm)
Discharge flow rate: 35 gpm
Pump operating pressure: 80 psi
Distance from nozzle to surface: 20 feet
Time per revolution: 20 minutes (time required for complete coverage of the total interior surface of a tank by the cleaning agent exiting the Sellers nozzle)
Minimum number of cycles: 12

In the VGMDU process, air receiver tanks shall be spray rinsed under pressure with a 2% CimClean TM solution or a 2% LP 969 TM solution. This spray rinsing under pressure dislodges rust, scale and solids. Vector shall spray clean the interior surfaces of receiver tanks with a cleaning agent for a minimum of 12 complete cycles.

At the starting point of the cleaning process for each air receiver tank, the cleaning agent shall contain no more than 50 ppm PCBs and no contamination above 2 ppm PCBs shall have come from sources other than cleaning metallic pipe and/or air compressor systems.

b. Metallic Pipe

Metallic pipe may be cleaned according to the performance-based procedure operating conditions demonstrated in the May 5 - 8, 1992 and in the July 26 - 31, 1993 PCB Disposal Demonstration.

The VGMDU process operated as below is approved to clean metallic pipe up to and including eight inches in diameter. The performance of the VGMDU operated as below has cleaned surfaces to less than 100 micrograms per 100

square centimeters (1 ug/cm²) but not less than 10 micrograms per 100 square centimeters (0.1 ug/cm²).

Metallic pipe eight-inches in diameter or less is decontaminated by flushing the pipe with cleaning agent using the pumping equipment described in the Demonstration Test Report dated June 5, 1992. The cleaning agent used may be either a 2% solution of Cimclean 30 TM or a 2% solution of LP 969 TM. This is pumped through the piping system with a centrifugal pump rated at approximately 300 gpm driven by a 25 horsepower, 240 volt, three phase electric motor. Cleaning agents are filtered through a sock type Findlow filter system and recirculated through the system. Net flushing time is for a minimum of four hours to achieve a PCB surface concentration level of between 10 and 100 ug/100 cm².

The VGMDU process operated as below is approved to clean metallic pipe up to and including 36 inches in diameter. The performance of the VGMDU operated as below has cleaned surfaces to less than 100 micrograms per 100 square centimeters (1 ug/cm^2) but not less than 10 micrograms per 100 square centimeters (0.1 ug/cm^2).

Metallic pipe 36 inches in diameter or less is decontaminated by spraying the pipe with a cleaning agent using the spraying equipment described in the Demonstration Test Report dated September 22, 1993. The cleaning agent used is a 2% solution of Cimclean 30. This is sprayed on the interior pipe surface by pumping the cleaning agent through a specially designed nozzle at a rate of approximately 28 gpm at a pressure of 1,800 to 2,000 psi. The cleaning agent is filtered through a sock type filter and recirculated through the system. Net flushing time is 30 square feet of interior pipe surface per minute to achieve a PCB surface concentration level of between 10 and 100 ug/100 cm² (See Table 1). Table 1 describes the operating parameters for various diameters of pipe.

c. Appurtenances and Equipment

(1) The process for cleaning appurtenances (valves, controllers, fittings, other pipeline equipment associated with metallic pipe, compressed air systems and disassembled air compressors) contaminated by PCBs may be undertaken according to the performance-based procedure operating conditions demonstrated in the May 5 - 8, 1992 PCB Disposal Demonstration. In this process, the items to be cleaned are disassembled as necessary to expose all surfaces for cleaning, and placed in a decontamination chamber as described in the permit application which is on file at EPA Headquarters. The items are placed in such a way that their

internal and external surface areas are exposed to a high velocity spray through several spray nozzles. The VGMDU process operated as below is approved to clean appurtenances. The performance of the VGMDU operated as below has cleaned parts and fittings to less than 10 micrograms per 100 square centimeters (0.1 ug/cm²). Therefore, the appurtenances cleaned according to the performance requirements below are unregulated for (a) further distribution in commerce, except in natural gas pipelines, and unregulated for disposal as set forth in Condition 4.

Approved operations for parts and fittings, which have been demonstrated to achieve surfaces cleaned to less than 0.1 ug/cm^2 , shall include the following equipment operating at the following limits:

Equipment: Better Engineering Parts Washer

Model No.: 200 HD
Flow Rate: 50 gpm
Temperature: 190° F
Operating Time: 1 hour

Cleaning Agent: 5% sodium hydroxide

solution.

The process for cleaning appurtenances (valves, controllers, fittings, other pipeline equipment associated with metallic pipe, compressed air systems, and other parts) contaminated by PCBs may be undertaken according to the performance-based procedure operating conditions demonstrated in the July 26 -30, 1993 PCB Disposal Demonstration. In this process, the items to be cleaned are disassembled as necessary to expose all surfaces for cleaning, and placed in a decontamination chamber as described in the Demonstration Test Report dated September 22, 1993. The items are placed in the decontamination chamber and completely immersed in the cleaning agent. cleaning agent is agitated by means of a submersible pump and heated with an external heat source. The VGMDU process operated as below is approved to clean appurtenances. The performance of the VGMDU operated as below has cleaned parts and fittings to less than 100 micrograms per 100 square centimeters (1 ug/cm²), but not less than 10 micrograms per 100 square centimeters (0.1 ug/cm²).

Approved operations for parts and fittings which have been demonstrated to achieve surfaces cleaned to less than 1.0 ug/cm² but not less than 0.1 ug/cm² shall consist of soaking the parts and fittings in an agitated, heated, is solution of Cimclean 30 for a period of 4 hours.

6. <u>Measurement-Based Cleaning of Metallic Pipe, Compressed</u> <u>Air Systems and Air Receiver Tanks</u>

Vector is only authorized to clean piping 8 inches or less associated with air compressors, appurtenances and air receivers (maximum diameter of 40 feet) regardless of the length of the tank and metallic piping up to 36 inches associated with air compressors, line pipe and other industrial uses.

The surface measurements shall be taken by wipe or swab sampling and the sampling wipes/swabs chemically analyzed according to the procedures submitted in the permit application dated February 8, 1992 and the demonstration test plan dated April 6, 1992. Air compressors, appurtenances and pipe cleaned are regulated for use/disposal based on the surface area requirements in Condition 4. Recleaned areas must be surface sampled at locations different from earlier sample sites.

a. Appurtenances

Appurtenances, that is, miscellaneous valves, controllers, parts, fittings, other equipment associated with compressed air systems, metallic piping and disassembled air compressors contaminated by PCBs, may be cleaned either by spraying in a decontamination chamber as described in Condition 5. C. 1 or by scaking in a heated, agitated solution of Cimclean 30 as described in Condition 5. C. 2. The process for cleaning appurtenances by either method requires verification by a wipe sampling process. For the spraying process, the items to be cleaned are disassembled as necessary to expose all surfaces for cleaning, and placed in a decontamination chamber is described in the permit application which is on file or EPA Headquarters. The items are placed in such a - 17 that their internal and external surface areas are exposed to a high-velocity spray through several square nozzles.

Following placement of the items to be clean: the chamber is then sealed to prevent volatile or: emissions. Any vapors are vented through a carbon absorption canister. For a period of at least one (60 minutes), a continuous high velocity recircularing flush shall be established by an external pump have the same capacity and flow rate as that documented the permit application and demonstrated from May 1992.

At the end of the high velocity spray/soak cycle the chamber shall be opened and the parts removed, and a 100 cm² wipe samples will be taken on 10% of the parts cleaned, or a minimum of two samples which ever is greater.

For appurtenances cleaned by the soaking method, the items are immersed in a heated, agitated solution of 2% Cimclean 30. Following placement of the items to be cleaned, the chamber is then sealed to prevent volatile organic emissions. Any vapors are vented through a carbon absorption canister. Items to be cleaned remain in the heated, agitated solution for a minimum of 4 hours. At the end of the soak cycle, the chamber shall be opened and the parts removed and a 100 cm² wipe sample will be taken on a representative number of parts (see above).

The PCB surface concentrations shall be determined by chemical analysis of the wipes by Gas Chromatography (GC). The analytical procedures used are described in Vector applications on file at EPA Headquarters.

In the event Vector does not achieve PCB levels below 1 ug/cm^2 , Vector may repeat the process using any or all of the cleaning agent until the PCB concentration is below .1 ug/cm^2 when recleaned surface levels are remeasured as above. This is applicable to parts a, b and c of this Condition.

b. Metallic Piping

For measurement-based cleaning of metallic pipe up to 8 inches by flushing, a minimum process time equal to the times given in the performance based cleaning in Condition 4.b. will be used.

The surface concentration shall be measured according to appropriate wipe (for 4-inch interior diameter or larger pipe) or swab (for less than 4-inch interior diameter pipe) sampling procedures.

A surface sampling to verify measurement-based procedures used to clean pipe, if there is less than 100 square feet or 9.0 square meters of pipe surface to be cleaned, only one sample is required. For pipe systems of over 9.0 square meters, one sample is required for each 9.0 square meters and one for any remaining surface area left beyond 9.0 square meters area or multiples of 9.0 square meters. A sample shall be taken for every 9.0 square meter of inside diameter pipe surface.

For measurement-based cleaning of pipe up to 36 inches by the spraying process, a minimum cleaning time equal to the times given in the performance-based cleaning in Condition 5.b will be used. The surface concentration shall be measured according to an appropriate wipe sample on a 100 cm² area.

If pipes to be cleaned are cut into convenient lengths and are not buried, one sample for each length of pipe will be taken. If the pipe is not cut into convenient lengths and/or is buried, one sample will be taken for every 100 linear feet of pipe, regardless of the diameter of the pipe.

c. Air Receiver Tanks

For measurement-based cleaning of air receiver tanks a minimum process time equal to the times specified in the performance based cleaning in Condition 4.a. will be used.

The surface concentration shall be measured according to approved sampling procedures. For surface sampling to verify measurement-based procedures to clean air receiver tanks, wipe samples will be taken from the interior surface of the air receiver tanks at the maximum throw distance. A spiked coupon shall be placed at the maximum throw distance and at the end of the test, the coupon shall be wipe sampled.

7. Feedstock Quality and Restrictions

Prior to decontamination, samples of cleaning agent from all parts of the VGMDU process shall be collected and analyzed using gas chromatography procedures specified in EPA-approved procedures outlined in the following documents:

"Guidelines for PCB Destruction Permit Applications and Demonstration Test Plans for PCB Disposal by Non-Thermal Alternative Methods," August 21, 1986;

"Recommended Analytical Requirements for PCB Data Generated On-Site During Non-Thermal PCB Destruction Tests," US EFA. March 19, 1986 (Draft);

"Quality Assurance and Quality Control Procedures for Demonstrating PCB Destruction in Filing for PCB Disposal Permit," US EPA, June 28, 1983 (Draft); and

"Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans," QAMS-005/80, Office of Research and Development, US EPA, December 29, 1980. For air receiver tanks the performance-based process demonstrated from May 5 - 8, 1992 used cleaning agent containing less than 50 ppm at the beginning of each pass. Therefore, when cleaning air receiver tanks, if the PCB concentration in process leaning agent is 50 ppm or greater, then that process fluid shall not be further used for the performance-based cleaning of air receivers, but may be filtered through the activated carbon filtration system and re-used.

Used cleaning agent containing 50 ppm or greater PCBs, and/or water containing 3 ppb or greater PCBs, may be authorized through this approval for reuse only in cleaning other contaminated air compressors, metallic pipe, disassembled air compressor, appurtenances, and the VGMDU. These liquids at these concentrations may be transported from one site to another so long as: they are transported and stored in USDOT-approved containers; the containers are labeled with the $M_{\rm L}$ mark according to 40 CFR 761.40; the equipment treated with the liquids at the different sites is regulated for disposal and belongs to the same owner; the liquids are not diluted with other liquids containing less than 50 ppm spent cleaning agent solution, and/or less than 3 ppb water; and the liquids which are no longer useful for cleaning or which have exceeded approved PCB concentrations for reuse shall be disposed of according to Condition 8.

Should Vector successfully demonstrate to EPA that the VGMDU process is capable of treating higher concentrations of PCBs in an air receiver/compressor systems or use different operating conditions for cleaning air receiver/compressor systems, this condition may be modified accordingly. Authorized EPA representatives may at their discretion choose to witness the demonstration and obtain split samples for verification of analytical results.

8. <u>Disposal of VGMDU Aqueous Liquids (Process Water and Spent Cleaning Agent</u>

All VGMDU aqueous liquids that have been in contact with any PCB articles such as disassembled air compressors, air receiver tanks, piping, valves, appurtenances and organic liquids containing 3 ppb and greater PCBs shall be filtered through an activated carbon filter until the treated process water is less than 3 ppb. These process waste cleaning agents shall have a pH range of 6-9. This treated process water at less than 3 ppb PCBs may then be sent to a Public Owned Treatment Works (POTW) or an industrial waste water treatment facility which has a National Permit Discharge Elimination System (NPDES) permit with a numeric limit to accept the level of PCBs in the aqueous liquids and discharge water containing less than 3 ppb of PCBs. If the process water is sent to a facility with a NPDES permit, Vector shall keep copies of manifests, the amount of water processed, the concentration of PCBs in the water to be processed, and the NPDES permit received by the POTW. Vector may also send the treated process water at less than 3 ppb to a RCRA approved disposal facility

9. VGMDU Decommissioning/Malfunction

If the surface sampling, as described in Condition 6, reveals that PCBs in the metallic piping or compressed air system have not been adequately removed after VGMDU repeated processing, the affected VGMDU shall cease operation and Vector must dispose of the metallic piping/compressed air system components in question as if it/they contained PCBs at the level of the original fluid. Vector must notify the EPA Regional PCB Disposal Coordinator in the applicable EPA Region prior to moving the VGMDU off site. Vector shall determine if the unsuccessful processing is due to contaminants in the fluid or VGMDU process failure. If the VGMDU successfully processes all the fluid from the next three consecutive passes, the cause of the unsuccessful processing shall be assumed to be contaminants in the fluid and not VGMDU process failure. If the VGMDU process cannot successfully decontaminate the PCB appurtenance, piping and air receiver tanks, the affected VGMDU must cease operation and Vector must notify the Chief, PCB Disposal Section at (202) 260-3964, as well as the Regional Coordinator during the next business day, and file with each of them a written report within 7 days. Repeated VGMDU process failures are signs of process malfunction and must be reported so that EPA is able to maintain accounting of working commercial VGMDUs. The affected VGMDU shall not resume operation until the problem has been corrected to the satisfaction of the Chief, PCB Disposal Section. A VGMDU which has been decommissioned must also be reported immediately to the Chief, PCB Disposal Section at EPA Headquarters and also to the Regional PCB Coordinator for the EPA Region in which such VGMDU is decommissioned.

10. <u>VGMDU Process Waste Restrictions</u>

All wastes generated by the VGMDU process (i.e., filter media, sludges, water or other effluents, rags, spill containment plastic sheeting, etc.) shall be treated or disposed of as if the waste stream contained the PCB concentration of the original source or wipe, valves, fittings and appurtenances as required by the "dilution rule" at 40 CFR 761.1 (b).

The carbon entrapment canister on the parts decontaminate and chamber must be replaced every six (6) months or immediately after 1400 hours of VGMDU operation, whichever is earliest.

11. VGMDU Process Monitoring/Recordkeeping

Provisions must be made to assure that the following information is suitably monitored and recorded for PCBs

processed, such that materials harmful to health or the environment are not inadvertently released:

- a. name, address, and telephone number of the VCMDU operator and supervisor;
- b. the name and business address of the person or firm whose PCB-containing air compressor system, metallic pipe, appurtenances, and/or PCB containing waste water are being processed;
- c. a description of the compressed air system, metallic piping, and/or appurtenances including the estimated dimensions of all air receiver tanks and the estimated dimensions of the compressed air system exclusive of the receivers, including the diameter and length of all the pipe in the system;
- d. the dates the VGMDU is on the site;
- e. the estimated quantity and PCB concentration of cleaning agent charged into the air compressor system, metallic piping, and/or appurtenances;
- f. the estimated quantity and PCB concentration of spent cleaning agent, waste water, and other treated materials produced during VGMDU processing/cleaning of each compressed air system or metallic pipe system;
- g. the date, time and duration of treatment for each compressed air system;
- h. a copy of the gas chromatogram to determine the final concentration of the treated cleaning agent or waste warm not sent for disposal;
- i. records of the estimated quantity and PCB concentration of wastes produced, the method of disposal and location the disposal facility for each waste;
- j. certificate of destruction from the TSCA-permitter facility and the equivalent acknowledgement of receipt/discharge from the facility with NPDES permit : : all PCB wastes disposed.

Disposal recordkeeping documents must be compiled with days of the testing date, must be kept at one centralized location, and must be made available for inspection by authorized representatives of the EPA. Such documents shall be maintain the records required by 40 years starting from the Vector's commercial job. Vector must also maintain the records required by 40 761.180(f). If Vector or its authorized agents terminate

business, these records or their copies must be submitted to the Director of Chemical Management Division.

In addition, Vector must maintain, aboard the VGMDU, a record of the PCB disposal services performed by the VGMDU during the previous month. These records must be available for inspection by authorized representatives of EPA.

12. PCB Releases

In the event Vector or an authorized field supervisor of the VGMDU believes, or has reason to believe, that a release of PCBs has occurred from the VGMDU during processing, Vector must inform the appropriate EPA Region by telephone within 2 business hours from the time of discovery. Any spills of PCBs or other regulated fluids shall be promptly controlled and cleaned up as provided in the Vector Spill Prevention Control and Countermeasure Plan, and in accordance with the TSCA PCB Spill Cleanup Policy (52 FR 10688, April 2, 1987). Cleanup shall begin immediately and must comply with the TSCA PCB Spill Cleanup Policy (52 FR 10688, April 2, 1987).

A written report describing the incident must be submitted to the appropriate EPA Regional Contact, the Regional Administrator, and the Director, Chemical Management Division of OPPT by the close of business on the regular business day following the incident. In addition, a written report describing the spill, operations involved, cleanup actions and changes in operation to prevent such spills in the future must be submitted to the appropriate EPA Regional Contact, Regional Administrator, and Director, CMD of OPPT within 5 business days.

PCB spills must be reported in accordance with the spill reporting requirements prescribed under Section 311 of the Clean Water Act for discharges to navigable waters and under the Comprehensive Environmental Response, Compensation, and Liability Act (Superfund) for discharges to other media.

13. Safety and Health

Vector shall comply with all applicable safety and health standards, as required by Federal, State and local regulations and ordinances. Any lost time injury must be reported to the appropriate EPA Regional Contact, Regional Administrator, and Director, CMD of OPPT by the end of the next business day.

14. Facility Security

The VGMDU shall be secured (such as a fence, alarm system, or barricades, as appropriate) at each site to restrict or control public access to the area.

15. Reporting

Any reports required by Conditions (6), (8), (10), and (11) are to be submitted by telephone to the appropriate regional PCB Disposal Site Coordinator within the time frame specified. In addition, Vector shall file written reports with the Regional Administrator of the appropriate EPA region, and the Director of the Chemical Management Division within the time frame specified in the aforementioned conditions.

16. Personnel Training

Vector shall be responsible for ensuring that the supervisory personnel directly involved with the handling or disposal of PCB contaminated fluid using the VGMDU process are demonstrably familiar with the general requirements of this approval. At a minimum, this must include:

- a. the types of systems and associated equipment which may be treated using the VGMDU;
- b. basic recordkeeping requirements under this approval and the location of records;
- c. notification requirements;
- d. waste disposal requirements for VGMDU process and byproduct wastes generated during the operation of the VGMDU process; and
- e. reporting requirements.

In this regard, Vector must maintain on-site during the operations of its VGMDU a copy of this approval; the spill prevention and cleanup plan; and sampling and analytical procedures used to determine PCB concentrations.

17. Equipment Transport

PCB-contaminated equipment (i.e., pumps, tanks, etc.) and liquids on the VGMDU shall be transported off-site in accordance with 40 CFR Section 761.40 and the U.S. Department of Transportation (USDOT) requirements of Title 49 Part 172. Such requirements include placarding the mobile facility and labeling all PCBs. Vector must comply with vehicle placarding requirements unless VGMDU process equipment (i.e., pumps, feel hoses, pipes etc.) on the VGMDU are decontaminated in accordance with the procedures described in Vector's permit application is test plan, prior to transportation off-site.

18. Financial Assurance

Vector shall incorporate financial assurance of closure in a liability coverage provisions into its closure plan. These provisions must be equivalent to those specified in 40 CFR Fig.

- 264, issued under Subpart H of the Resource Conservation and Recovery Act (RCRA), and provide funds for:
 - a. proper closure of the VGMDU and support operations; and
 - b. compensating others for bodily injury and property damage caused by accidents arising from operations of the VGMDU.

Vector has filed with the Director, Chemical Management Division, a closure plan, closure cost estimates, and financial assurance mechanism. EPA has not completed its review of these documents. Following EPA review, should Vector receive a Notice of Deficiency for any or all of these documents, Vector shall have thirty days to satisfactorily address all deficiencies or this approval is automatically suspended on the thirty first day. Within thirty days of receipt by Vector of a Notice of Acceptance for the closure plan, closure cost estimates, and financial assurance mechanism, Vector shall have its financial assurance mechanism in place in full force and effect or the approval is automatically suspended on the thirty first day. Vector may request an extension from OPPT for either of these deadlines. EPA considers financial assurance a critical condition in this in this approval.

Vector must submit annual updates to the Director, Chemical Management Division of the financial assurance of closure and liability coverage provision described herein.

19. Additional VGMDU

Vector must file a written pre-operation report with the Director of the Chemical Management Division within thirty (30) days from the date of manufacture of each additional VGMDU which is to be operated in the United States. This report shall contain the following information:

- a. date of manufacture of the VGMDU;
- b. identification and/or serial number of the new VGMDU;
- c. certification by an independent, registered professional engineer to the effect that the VGMDU is substantially identical to the original VGMDU in terms of engineering design, hardware, VGMDU process capacity, quality and workmanship;
- d. certification by the chief executive officer of Vector signifying that the VGMDU construction has been completed in such manner; and

e. a list of all substantive and non-substantive changes made to the design and construction of any new VGMDU which is not identical to the original VGMDU.

20. VGMDU Process/Equipment Modifications

No major modifications may be made to the VGMDU design, as described in the application and demonstration plan for this approval, without written approval of the Director of the Chemical Management Division.

21. Ownership Transfer

Vector must notify EPA at least 30 days before transferring ownership of the VGMDU process. Vector must also submit to EPA, at least 30 days before such transfer, a notarized affidavit signed by the transferee which states that the transferee will abide by Vector's EPA approval. Within 30 days of receiving such notification and affidavit, EPA will issue an amended approval substituting the transferee's name for Vector's name, or may require the transferee to apply for a new PCB disposal approval. In the latter case, the transferee must abide by Vector's approval until EPA issues the new approval to the transferee. Should Vector fail to provide EPA with the required written documentation of the transfer or to provide this documentation within the specified time frame, this approval shall be null and In any instance, Vector must maintain its financial assurance mechanism in full force and effect until release, in writing by the Director, Chemical Management Division.

22. Approval Severability

The conditions of this approval are severable, and if any provision of this approval or any application of any provision held invalid, the remainder of this approval shall not be affected thereby.

23. Approval Expiration Date

This approval shall expire on January 30, 1998. For in approval renewal, EPA may require additional information and a testing of the VGMDU process. To continue the effectiveness this approval pending EPA action on reissuance, Vector must submit a renewal request in writing to EPA at least 90 days, and more than 180 days, prior to the expiration date of this approval.

24. Compliance with Federal Regulations

Vector shall comply with all applicable requirements of the Federal PCB Regulation, 40 CFR Part 761, in operation of the VGMDU. Particular note shall be given to:

- a. 40 CFR, section 761.65 storage for disposal;
- b. 40 CFR, section 761.79 decontamination; and
- c. 40 CFR, section 761.180 records and monitoring.
- d. 40 CFR, section 761, Subpart J, PCB waste disposal records and reports.

25. <u>Previous Approvals</u>

This approval shall supersede all previous U.S. EPA Headquarters and/or U.S. EPA Regional PCB disposal approvals or amendments for the VGMDU process.

APPROVAL

1. Approval to dispose of PCBs is hereby granted to Vector Group, Inc. (Vector) of Cincinnati, Ohio, subject to the conditions expressed herein, and consistent with the materials and data included in the approval application filed by the company. EPA reserves the right to impose additional conditions or otherwise modify this approval when it has reason to believe that the continued operation of the Vector Group Mobile PCB Decontamination Unit (VGMDU) presents an unreasonable risk to public health or the environment or if from time to time EPA modifies the rules and regulations governing this approval. Any such proposed additional conditions shall be preceded by reasonable advance notice to Vector and opportunity for Vector to comment on the proposed modifications.

Any departure from the conditions of this approval or the terms expressed in the application must receive prior written authorization of the Director, Chemical Management Division of the Office of Pollution Prevention and Toxics. In this context, "application" shall be defined as all data and materials which have been received by EPA from Vector regarding the VGMDU process.

- 2. This approval to dispose of PCBs does not relieve Vector of the responsibility to comply with all applicable Federal, State and local regulations. Violations of any applicable regulations may be subject to enforcement action, and may result in termination of this approval. This approval may be rescinded at any time for failure to comply with the terms and conditions herein, failure to disclose all relevant facts, or for any other reasons which the Director, Chemical Management Division deems necessary to protect public health and the environment.
- 3. Vector shall be responsible for the actions of any authorized VGMDU process employees when those actions are within the scope of operating or moving the equipment related to performance of the VGMDU process, and Vector shall assume full responsibility for compliance with all applicable Federal, State and local regulations including, but not limited to, any advance or emergency notification and accident reporting requirements.
- 4. EPA reserves the right for its employees or agents to inspect Vector PCB disposal activities at any location or reasonable time.

Date

John W. Melone, Director Chemical Management Division

APPENDIX I

TO THE VECTOR APPROVAL TO DISPOSE OF POLYCHLORINATED BIPHENYLS

BACKGROUND

Section 6(e)(1)(A) of the Toxic Substances Control Act (TSCA) requires that EPA promulgate rules for the disposal of polychlorinated biphenyls (PCBs). The rules implementing section 6(e)(1)(A) were published in the Federal Register on May 31, 1979 (44 FR 31514) and recodified in the Federal Register of May 6, 1982 (47 FR 19527). Those rules require, among other things, that various types of PCBs and PCB Articles be disposed of in EPA-approved landfills (40 CFR 761.75), incinerators (40 CFR 761.70), high efficiency boilers (40 CFR 761.60), or by alternative methods (40 CFR 761.60(e)) that demonstrate a level of performance equivalent to EPA-approved incinerators or high efficiency boilers. The May 31, 1979 Federal Register also designated Regional Administrators as the approval authority for PCB disposal facilities.

On March 30, 1983, EPA issued a procedural rule amendment to the PCB rule (49 CFR 13181). The procedural rule change transferred the review and approval authority of mobile and other PCB disposal facilities that are used in more than one region to the Office of Pesticides and Toxic Substances (OPTS). The purpose of the amendment was to eliminate duplication of effort in the regional offices and to unify the Agency's approach to PCB disposal. The amendment gives the Assistant Administrator authority to issue nationwide approvals (i.e., approval which will be effective in all ten EPA regions) to mobile and other PCB disposal facilities that are used in more than one region.

EPA received an application dated February 8, 1991 from Vector for a permit to clean PCB-contaminated compressed air systems (including piping, air receiver tanks, parts and appurtenances) at industrial facilities. Vector's Demonstration Plan was submitted to EPA on April 6, 1992. From May 5 - 8, 1992 Vector demonstrated the VGMDU process on equipment and metallic pipe up to 12-inches in diameter at a facility in Sterling, Virginia. A second demonstration was held from July 26 - 30, 1993 in Cincinnati, Ohio to expand the scope of the existing permit.

The findings presented in APPENDIX II below are for the Vector PCB disposal demonstrations conducted during May 1992 and July, 1993. Complete, acceptable demonstration test reports dated June 5, 1992 and September 22, 1993 are in EPA's files.

APPENDIX II

TO THE VECTOR APPROVAL TO DISPOSE OF POLYCHLORINATED BIPHENYLS

FINDINGS

- 1. Vector Group, Inc. (Vector), of Cincinnati, Ohio has demonstrated a solvent extraction process, the Vector Group Mobile PCB Decontamination Unit (VGMDU) whereby PCB articles. mainly contaminated metallic pipe, compressed air systems, and air receiver tanks are decontaminated to levels between 10 and below 100 micrograms per 100 square centimeters (ug/100 cm²) for receivers and metallic pipe and less than 10 ug/100 cm² for parts and appurtenances.
- 2. The Vector decontamination process for metallic piping eight-inches in diameter and less includes the extraction and removal of PCBs by flushing with an extraction cleaning agent. The process for metallic piping 36 inches in diameter or less includes the extraction and removal of PCBs by spraying with an extraction cleaning agent.

The VGMDU procedure for cleaning air receivers, bottles or tanks consists of spraying the interior surface with a cleaning agent through a Sellers 360 high-pressure nozzle.

The VGMDU process for cleaning parts consists of spraying the parts in a rotating tray in a commercial parts washer.

- 3. The VGMDU process includes a water treatment system whereby all spent cleaning agent is pumped through a series of activated carbon canisters. Treated spent cleaning agent is analyzed for PCB content and is either re-used or, if it contains a PCB concentration of less than 3 ppb, is disposed of in an appropriate POTW or other facility having a appropriate NPDES permit.
- 4. Only operation of the VGMDU process by Vector personnel has been demonstrated to the EPA. Therefore, this permit only applies to VGMDUs operated by Vector personnel. Vectormanufactured VGMDUs under lease to other companies or persons are not approved for operation under this permit.
- 5. The VGMDU is a completely enclosed mobile process that is designed to prevent any release of PCBs to air, water, or to surfaces. The VGMDU was developed by Vector. From the results of the demonstrations conducted from May 5 8, 1992 and from July 26 30, 1993, the decontamination process is effective in removing PCBs from:

- a. air receivers, metallic piping 36 inches in diameter and less, and air compressors, and appurtenances to below 100 micrograms/100 square centimeter.
- b. air compressor parts to below 10 micrograms/100 square centimeters.

Further details of the methods and equipment used in the cleaning of disassembled air compressors, metallic pipe, air receivers, valves, controller and fittings from a compressed air system are included in the VGMDU process demonstration test plan on file at EPA Headquarters.

- 6. The VGMDU is designed with shut-off valves at key locations and other safety features which will act to prevent spills into the environment. The VGMDU is housed on a flatbed trailer and shall be operated in a restricted area. The VGMDUs are placed on a containment pad with a berm.
- 7. The VGMDU is a closed system and does not emit harmful materials into the air, water, soils, or other surfaces. The permit application and process demonstration test plan state that both the operators of the VGMDU and persons conducting sampling of the VGMDU use specified safety procedures and have proper protective clothing to minimize worker exposure.

Any waste streams from the process will be packaged in Department of Transportation (DOT) approved packaging containers. The containers will include appropriate liquid transport in bulk and/or drums of 55 gallon or 30 gallon size and/or 1 to 5 gallon carboys placed in an overpack 55 or 30 gallon drum with absorbent materials sufficient to absorb twice the volume of the liquids present, as appropriate. Absorbent wastes shall be packaged and handled according to the requirements for PCB containing solids. The liquid and solid wastes will be disposed of by incineration unless compliance with landfill disposal regulations can be demonstrated or, for the aqueous portions having PCB levels called appropriate NPDES permit.

8. The VGMDU process has shown to have a level of performance equivalent to that of thermal destruction methods (incinerative and high efficiency boilers). Under EPA regulations (40 CFR 761.60(e)), many factors are used to determine the appropriate destruction equivalency goals for alternate PCB destruction methods. Submissions from Vector during the previous permit application process have indicated that the decontamination methods meet the standards set by an EPA-approved incineration high efficiency boiler in the efficiency of disposal. Furthermore, the VGMDU is designed to protect workers from a exposure and precludes any apparent release of PCBs to the environment.

- 9. Therefore, EPA finds that a demonstration of the Vector PCB disposal method is equivalent to a demonstration of a 40 CFR Part 761.70 incinerator or 40 CFR Part 761.60 high efficiency poiler and that the demonstration of the VGMDU does not pose an unreasonable risk of injury to human health or the environment.
- 10. EPA does not take the responsibility for any damage that the Vector cleaning agents might cause to any item or equipment as a result of using the VGMDU process.

APPENDIX III A

TO THE VECTOR APPROVAL TO DISPOS	SE OF POLYCHLORINATED BIPHENYLS
*********	*******
SAMPLE VGMDU PROCESS 30-DAY	ADVANCE NOTIFICATION FORM
Client Name: Client Address:	Vector Contact: Phone:
Contact: Phone:	
Type of PCB Disposal Activity:	
Amount and Type of PCB Material:	
PCB Concentration Range:	
Scheduled Time(s) and Date(s):	
Contacts and Phone:	
EPA - Wash., D.C. Chief, OB (TS-798) 401 M Street S.W. Washington, DC 20460 202-260-3933	State Agency
EPA Region	<u>Local</u>
Site Locations:	

APPENDIX III B

TO	THE	VECTOR	APPROVAL	TO	DISPOSE	OF	POLYCHLORINATED	BIPHENYLS
****	***	*****	*****	***	*****	***	******	******

SAMPLE VGMDU PROCESS TWO WEEK ACTIVITY SCHEDULE FORM

Period Covered:

EPA Region	Most Probable Operating Date	Scheduled Date(s) & Time(s)	No. of Sites	County(s) of Operation or Central Location & Contact Phone No.
---------------	---------------------------------------	-----------------------------	-----------------	---

Week No. 1:

Week No.2:

APPENDIX III C

TO THE VECTOR APPROVAL TO DISPOSE OF POLYCHLORINATED BIPHENYLS

SAMPLE THIRTY DAY NOTIFICATION FORM FOR CONDITION NO. 1

Company Name, Address, Phone Number, and Contact Person:

Person, Organizational Affiliation/Title, and Phone Number for:

EPA Regional Contact:

State Contact:

Local (Town/City/County) Contact:

Nature of the Disposal Activity:

Kind of PCB Disposal Process:

Kinds of Material Containing PCBs:

Numbers and Sizes of Pieces of Equipment Containing PCBs:

Quantity of Solids and/or Volume of Liquid(s) Containing PCBs:

Concentration(s) of PCBs in the Material Treated:

Location

Street Address or Other Identifier for All Sites:
Telephone Contact and Address for Site Manager:

Time of Processing

Date(s):

Time(s):

APPENDIX III D

NOTICE OF INTENT TO OPERATE AND PUBLIC MEETING

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region III
6TH and Walnut Streets
Philadelphia, Pennsylvania

Date of this notice: Public Notice No.

The Vector Group, Inc., which is located at 1118 Ferris Rcad, Cincinnati, OH 45102 proposes to commence permanent operations for the storage and destruction of PCBs wastes. A TSCA permit was granted to Vector Group, Inc. on under the authority of the Toxic Substances Control Act.

Persons wishing to comment on the intent to commence permanent operation must submit in writing. Written comments must be sent to United States Environmental Protection Agency, 6th and Walnut Streets, Philadelphia, PA 19106, Attention: Joe Green (3TS9) and must be received by EPA on or before

If the written comments warrant a public meeting, then it will be held by EPA to receive such comments on _______ in the

All comments should address the appropriateness of the decision to grant permanent operations to Vector. All comments must raise ascertainable issues and should be accompanied by all reasonably available arguments, factual grounds and supporting material. It is EPA's intent to limit comments at the meeting to a maximum of five minutes per speaker so persons wishing to participate in the hearing are encouraged to prepare written material to be submitted along with any oral comments.

at p.m.

All written comments received by the above date and all comments received at the meeting will be considered in the formulation of final determination regarding permanent operations. After considering all comments and the requirements and policies in TSCA and its implementing regulations, the EPA Regional Administrator will make a decision regarding permanent operations.

The administrative record, including the application, all data submitted by the applicant, the fact sheet, the approval, maps showing the exact facility locations and comments received and

copied at EPA Region III, 6th & Walnut Streets, Philadelphia, PA 19106, between the hours of 8:30 a.m. and 4:30 p.m. Monday through Friday. A copying machine will be provided for public use at a charge per page. Any person desiring further information, copies of portion of the administrative record, or an appointment to review the record should contact Joe Green at the above address or call (215) 597-1234.

An additional copy of the application, approval and fact sheet will be available for review at the Pennsylvania Department of Environmental Resources, Solid Waste Division, 123 Main Street, Philadelphia, PA 19111.

TABLE 1

Cleaning Time for Various Pipe Diameters for Performance-Based Cleaning

Nominal Pipe Diameter (inches)	Interior Pipe Surface per Lineal Foot (Ft²)	Lineal Feet per Minute of Cleaning Time to Achieve 30 Ft²/Minute (Ft./Minute)	Time Required to clean 40 Lineal Ft. of Pipe at a Rate of 30 Ft ² /Minute (Minutes)
4	1.05	28.6	1.4
6	1.57	19.1	2.1
8	2.09	14.3	2.8
10	2.62	11.5	3.5
12	3.14	9.5	4.2
14	3.67	8.2	4.9
16	4.19	7.2	5.6
18	4.71	6.4	6.3
20	5.24	5.7	7.0
24	6.28	4.8	8.4
30	7.85	3.8	10.5
36	9.42	3.2	12.6

ADDITIONAL PROCEDURES FOR THE PCB DECONTAMINATION OF THE PRIMARY AND SECONDARY SHREDDERS AND THE DRUM CRUSHER AT THE CWM CHEMICAL SERVICES SITE

11700 SOUTH STONY ISLAND AVENUE, CHICAGO, ILLINOIS

General Decontamination Procedures

- The shredders and the drum crusher can remain intact during decontamination to allow operation of the equipment in order to rotate the teeth of the shredders and to extend the rams of the drum crusher.
- 2. The solution used for the high pressure spray (using the Sellers nozzle) or for the steam cleaning (if the Sellers nozzle will not fit into any chamber) shall be a 2% CimClean TM solution or a 2% LP 969 TM solution as required by Vector's U.S. EPA issued Approval to Dispose of Polychlorinated Biphenyls (PCBs), Amended, dated March 17, 1994, (nationwide approval). If an alternative cleaning solution or mixture must be used, a description of the solution/mixture must be provided to the U.S. EPA for review and approval.
- 3. Final decontamination of each component will be considered complete only after confirmatory sampling, conducted in accordance with the procedures noted below, show that the surfaces are less than 100 ug/100 cm² PCBs.
- 4. If any sample of a wall shows 100 ug/100 cm² or greater, all of the walls in that segment shall be recleaned by high pressure spray or steam cleaning until a confirmatory wipe sample taken from the same location as the original wipe sample shows less than 100 ug/100 cm².
- 5. If the sample of any shredder tooth shows 100 ug/100 cm² or greater, all of the teeth shall be recleaned by high pressure spray or by steam cleaning until a confirmatory wipe sample taken from the same location as the original wipe sample shows less than 100 ug/100 cm².
- 6. The drum crusher shall be cleaned with the two crushing rams in a completely extended position for two hours and in a completely receded position for two hours. Vector should attempt to use the high pressure spray for the decontamination of the drum crusher, and should use the steam cleaner only if the drum crusher cannot be adequately sealed.
- 7. After the decontamination has been confirmed, all nonmetallic materials shall be removed from the decontaminated sections of the equipment and should be disposed of as a PCB waste.

- 8. The exterior surfaces of the shredders and the drum crusher shall be inspected for signs of oil, sludge or grease. If either is observed, the exterior of the equipment shall also be steam cleaned and a wipe sample should be collected from the area covered by the oil, sludge or grease. If the wipe sample shows 100 ug/100 cm² or greater, than the area shall be recleaned by high pressure spray or steam cleaning until a confirmatory wipe sample taken from the same location as the original wipe sample shows less than 100 ug/100 cm².
- 9. All process water and spent cleaning agent shall be shipped off-site for final discharge or disposal (also, see below).
- 10. Unless otherwise addressed in these enclosures, Vector shall adhere to the following Conditions of its nationwide approval:
 - Condition 4. Disposal/Reuse of Decontaminated Material
 - Condition 6. Measurement-Based Cleaning of Metallic Pipe, Compressed Air Systems and Air Receiver Tanks
 - Condition 7. Feedstock Quality and Restrictions
 - Condition 8. Disposal of Aqueous Liquids (Process Water and Spent Cleaning Agent)
 - Condition 9. Decommissioning/Malfunction
 - Condition 10. Process Waste Restrictions
 - Condition 11. Process Monitoring/Recordkeeping
 - Condition 12. PCB Releases
 - Condition 13. Safety and Health
 - Condition 14. Facility Security
 - Condition 15. Reporting
 - Condition 16. Personnel Training
 - Condition 17. Equipment Transport

POST DECONTAMINATION SAMPLING THE PCB DECONTAMINATION OF THE PRIMARY AND SECONDARY SHREDDERS AND THE DRUM CRUSHER AT THE CWM CHEMICAL SERVICES SITE

11700 SOUTH STONY ISLAND AVENUE, CHICAGO, ILLINOIS

Sampling Locations

A. Primary Shredder Decontamination

Nine wipe samples of the surfaces of the primary shredder should be collected from the following locations after decontamination:

- The center of the top-side of the ram;
- The center of the under-side of the ram;
- The horizontal center of both inside walls which are parallel to the axle of the shredder teeth, at a position 6" above the shredder teeth;
- The horizontal and vertical center of one of the inside walls perpendicular to the axle of the shredder teeth;
- Three samples of the shredder teeth, one taken from the exposed sides of the second and the center tooth, and one taken from the top of a randomly selected tooth;
- If accessible, a sample of the side of the tooth at the opposite end of the access door should be collected;
- A sample of the housing wall from under the shredder teeth at the midpoint between the teeth and the bottom of the housing. The housing wall sampled should be one which is parallel to the axle of the shredder teeth.

B. <u>Secondary Shredder Decontamination</u>

Four wipe samples of the surfaces of the secondary shredder should be collected from the following locations after decontamination:

- Three samples of the shredder teeth, one taken from the exposed sides of the second tooth from both ends and one from the center tooth;
- The center of one of the inside walls which are parallel to the axle of the shredder teeth.

C. <u>Drum Crusher</u>

Eight wipe samples of the interior surfaces of the drum crusher should be collected from the following locations after decontamination:

The under-side of each ramming plate;

- The floor of the crusher located under one of the ramming plates;
- The floor of the crusher located at one of the opposite corners of the previous floor sample;
- Two of the door, one at the horizontal center of the door and at a position 6 inches from the bottom of the door, and one of the center of the door;
- The wall opposite the door at the horizontal center of the wall and at a position 6 inches from the floor;
- The ceiling of the crusher;
- The center of one of the inside side walls.

VECTOR GROUP, INC. LETTER DATED JANUARY 24, 1995 January 24, 1995

United States Environmental Protection Agency Region V 77 West Jackson Boulevard Chicago, IL 60604-3507

Attn: Mr. Tony Martig

Re: Proposed Cleaning Procedure

PCB-Contaminated Equipment

CWM Facility Chicago, Illinois

Gentlemen:



Vector Group, Inc. (Vector) has been retained by Clean Harbors to decontaminate and deregulate some PCB-contaminated equipment at the above referenced site. Vector has been requested to describe the procedure to be used for this activity. Where possible, Vector will follow the procedures outlined in Vector's Approval issued by the USEPA. Please let us know as soon as possible of any proposed modifications. Clean Harbors would like to begin this cleaning by February 1, 1995.

CLEANING PROCEDURE

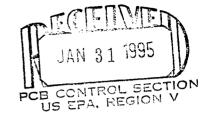
LARGE SHREDDER

The area around the tank under the large shredder will be bermed to provide containment for the area.

The large shredder can be divided into three segments as follows:

- Segment A, the upper portion of the hopper from the top of the hopper to the hydraulically operated "ram" that is used to force material in the hopper into the shredder blades.
- Segment B, the lower portion of the hopper, from the "ram" to the shredder teeth..
- Segment C, the lower portion of the shredder from the shredder teeth to the conveyor that removes material from the shredder and the "pan" below the conveyor that collects material and liquid that passes through the conveyor.





DRUM CRUSHER

Since it is unlikely that the drum crusher can be adequately sealed to allow the use of the Sellers nozzle, the drum crusher will be placed inside of an open top poly tank and cleaned by steam cleaning. One 100 cm² wipe sample will be taken from the floor of the drum crusher, and cleaning will continue until the remediation objective has been reached.

Regards,

MC Weisfer M. C. Durfee

Program Manager

cc:

Mr. Winston Lue

Mr. Paul Ahern

Mr. Alan Mount

ADDITIONAL PROCEDURES FOR THE PCB DECONTAMINATION OF THE PRIMARY AND SECONDARY SHREDDERS AND THE DRUM CRUSHER AT THE CWM CHEMICAL SERVICES SITE

11700 SOUTH STONY ISLAND AVENUE, CHICAGO, ILLINOIS

General Decontamination Procedures

- The shredders and the drum crusher can remain intact during decontamination to allow operation of the equipment in order to rotate the teeth of the shredders and to extend the rams of the drum crusher.
- 2. The solution used for the high pressure spray (using the Sellers nozzle) or for the steam cleaning (if the Sellers nozzle will not fit into any chamber) shall be a 2% CimClean TM solution or a 2% LP 969 TM solution as required by Vector's U.S. EPA issued Approval to Dispose of Polychlorinated Biphenyls (PCBs), Amended, dated March 17, 1994, (nationwide approval). If an alternative cleaning solution or mixture must be used, a description of the solution/mixture must be provided to the U.S. EPA for review and approval.
- Final decontamination of each component will be considered complete only after confirmatory sampling, conducted in accordance with the procedures noted below, show that the surfaces are less than 100 ug/100 cm² PCBs.
- 4. If any sample of a wall shows 100 ug/100 cm² or greater, all of the walls in that segment shall be recleaned by high pressure spray or steam cleaning until a confirmatory wipe sample taken from the same location as the original wipe sample shows less than 100 ug/100 cm².
- 5. If the sample of any shredder tooth shows 100 ug/100 cm² or greater, all of the teeth shall be recleaned by high pressure spray or by steam cleaning until a confirmatory wipe sample taken from the same location as the original wipe sample shows less than 100 ug/100 cm².
- 6. The drum crusher shall be cleaned with the two crushing rams in a completely extended position for two hours and in a completely receded position for two hours. Vector should attempt to use the high pressure spray for the decontamination of the drum crusher, and should use the steam cleaner only if the drum crusher cannot be adequately sealed.
- 7. After the decontamination has been confirmed, all nonmetallic materials shall be removed from the decontaminated sections of the equipment and should be disposed of as a PCB waste.

- The exterior surfaces of the shredders and the drum crusher shall be inspected for signs of oil, sludge or grease. either is observed, the exterior of the equipment shall also be steam cleaned and a wipe sample should be collected from the area covered by the oil, sludge or grease. If the wipe sample shows 100 ug/100 cm² or greater, than the area shall be recleaned by high pressure spray or steam cleaning until a confirmatory wipe sample taken from the same location as the original wipe sample shows less than 100 ug/100 cm2.
- 9. All process water and spent cleaning agent shall be shipped off-site for final discharge or disposal (also, see below).
- 10. Unless otherwise addressed in these enclosures, Vector shall adhere to the following Conditions of its nationwide approval:
 - Disposal/Reuse of Decontaminated Material Condition 4. Measurement-Based Cleaning of Metallic Pipe, Condition
 - Compressed Air Systems and Air Receiver Tanks
 - Condition 7. Feedstock Quality and Restrictions
 - Disposal of Aqueous Liquids (Process Water Condition 8. and Spent Cleaning Agent)
 - Decommissioning/Malfunction Condition 9.
 - Condition 10. Process Waste Restrictions
 - Condition 11. Process Monitoring/Recordkeeping
 - Condition 12. PCB Releases
 - Condition 13. Safety and Health
 - Facility Security Condition 14.
 - Condition 15. Reporting
 - Condition 16. Personnel Training
 - Condition 17. Equipment Transport

POST DECONTAMINATION SAMPLING THE PCB DECONTAMINATION OF THE PRIMARY AND SECONDARY SHREDDERS AND THE DRUM CRUSHER AT THE CWM CHEMICAL SERVICES SITE

11700 SOUTH STONY ISLAND AVENUE, CHICAGO, ILLINOIS

Sampling Locations

A. Primary Shredder Decontamination

Nine wipe samples of the surfaces of the primary shredder should be collected from the following locations after decontamination:

- The center of the top-side of the ram;
- The center of the under-side of the ram;
- The horizontal center of both inside walls which are parallel to the axle of the shredder teeth, at a position 6" above the shredder teeth;
- The horizontal and vertical center of one of the inside walls perpendicular to the axle of the shredder teeth;
- Three samples of the shredder teeth, one taken from the exposed sides of the second and the center tooth, and one taken from the top of a randomly selected tooth;
- If accessible, a sample of the side of the tooth at the opposite end of the access door should be collected;
- A sample of the housing wall from under the shredder teeth at the midpoint between the teeth and the bottom of the housing. The housing wall sampled should be one which is parallel to the axle of the shredder teeth.

B. <u>Secondary Shredder Decontamination</u>

Four wipe samples of the surfaces of the secondary shredder should be collected from the following locations after decontamination:

- Three samples of the shredder teeth, one taken from the exposed sides of the second tooth from both ends and one from the center tooth;
- The center of one of the inside walls which are parallel to the axle of the shredder teeth.

C. <u>Drum Crusher</u>

Eight wipe samples of the interior surfaces of the drum crusher should be collected from the following locations after decontamination:

The under-side of each ramming plate;

- The floor of the crusher located under one of the ramming plates;
- The floor of the crusher located at one of the opposite corners of the previous floor sample;
- Two of the door, one at the horizontal center of the door and at a position 6 inches from the bottom of the door, and one of the center of the door;
- The wall opposite the door at the horizontal center of the wall and at a position 6 inches from the floor;
- The ceiling of the crusher;
- The center of one of the inside side walls.



1200 CROWN COLONY DRIVE, P.O. BOX 9137 • QUINCY, MA 02269-9137 (617) 849-1800

Via Federal Express

January 19, 1995

Mr. Anthony Martig United States Environmental Protection Agency Region V 77 West Jackson Boulevard Chicago, IL 60604-3590

Re: Clean Harbors of Chicago, Inc.

Decontamination/Closure Plan

Primary/Secondary Shredders for Decontamination

Dear Mr. Martig:

Pursuant to your request, enclosed please find for two (2) equipment drawings submitted in consideration of Clean Harbors of Chicago, Inc.'s (CHCI's) request to TSCA decontaminate the primary and secondary shredder systems at the CWM Chemical Services, Inc. facility in Chicago, IL. The drawing entitled "Dual Hydraulic Drive" depicts the primary shredder system housed in Building 43, and the drawing entitled "Shredder Assembly" depicts the secondary shredder located in Building 26.

Please note that Mr. Chuck Durfee of Vector Group, Inc. will be submitting to you a written procedure for the actual decontamination operations in the next few days.

If you have any questions, please feel free to contact me at (617)849-1800, extension 4473.

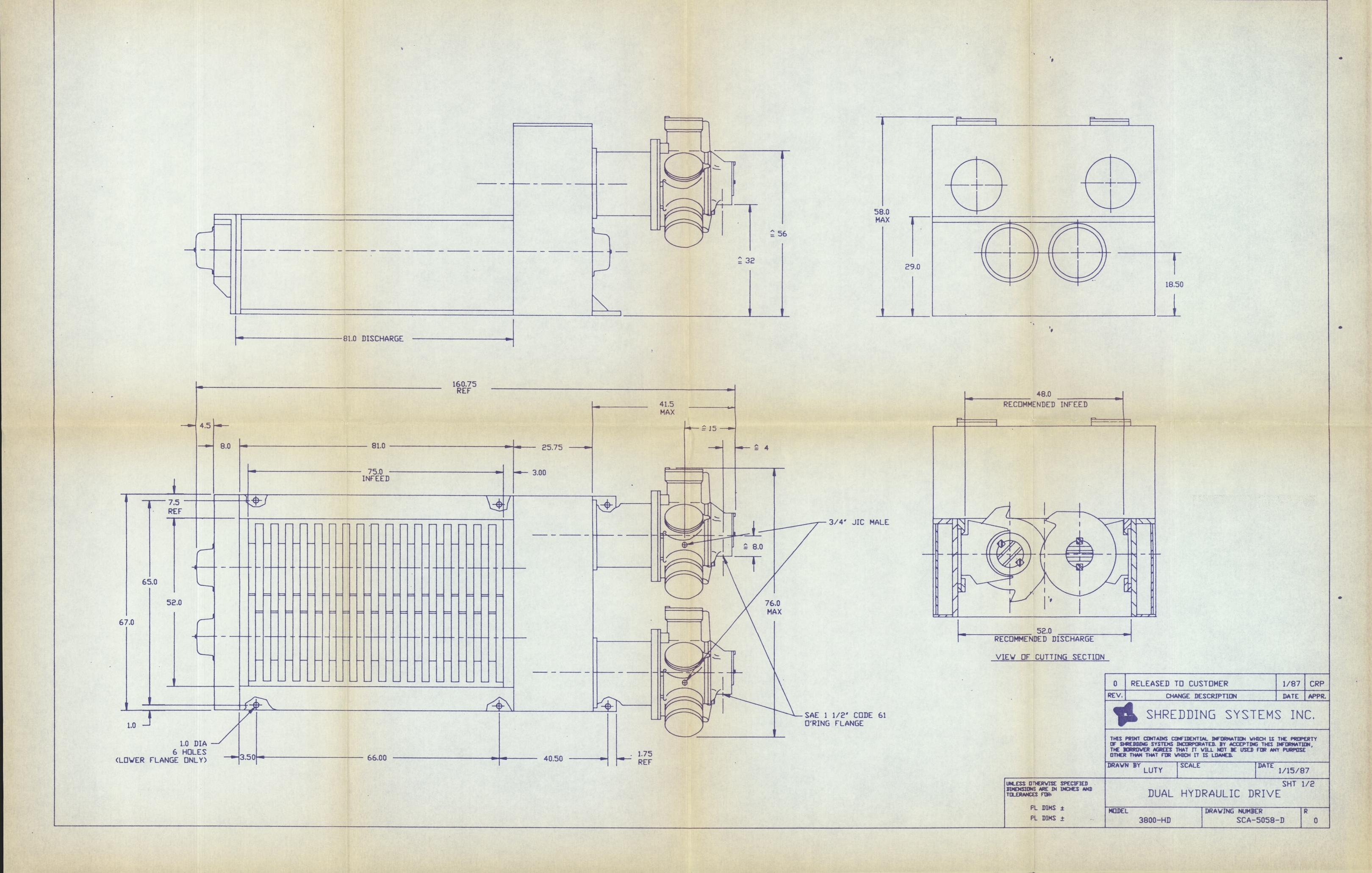
Sincerely,

Paul A. Ahearn

Manager, Regulatory Compliance

cc: Stephen Pozner, V.P., Compliance and Health & Safety, CHESI

Enclosures





1200 CROWN COLONY DRIVE, P.O. BOX 9137 • QUINCY, MA 02269-9137 (617) 849-1800

Via Federal Express

May 31, 1995

Mr. Anton Martig
US Environmental Protection Agency
77 West Jackson Boulevard
Chicago, IL 60604-3590

Re: Clean Harbors of Chicago, Inc.

Final Report - PCB Decontamination Activities

Dear Mr. Martig:

Enclosed please find for your review and approval is one (1) copy of the document entitled: "Final Report, Remediation of the Primary and Secondary Shredders and Drum Crusher" prepared by Vector Group, Inc. for polychlorinated biphenyl (PCB) decontamination activities performed at the CWM Chemical Services Inc. (CWMCSI) facility in Chicago, IL.

This Final Report describes the decontamination activities and confirmation analyses conducted on primary and secondary shredders and drum crusher as part of the approved TSCA closure of those units.

This report is being submitted to you in advance of the final RCRA/TSCA closure report. CHCI requests that the Agency review Vector's findings and issue a final determination that the primary shredder is now considered to to be TSCA decontaminated, and may be released from the CWMCSI site. It is CHCI's intention to ship the decontaminated primary shredder to the Clean Harbors hazardous waste incineration facility located in Kimball, Nebraska as soon as possible.

If you have any questions, please feel free to contact me at (617)849-1800, extension 4473.

Sincerely,

Paul A. Ahearn

Manager, Regulatory Compliance

and a. ahean

cc: Stephen Pozner, Sr. V.P., Compliance and Health & Safety, CHESI

Enclosure

FINAL REPORT

REMEDIATION OF THE PRIMARY AND SECONDARY SHREDDERS AND DRUM CRUSHER

CLEAN HARBORS AND CWM CHEMICAL SERVICES SITE 11700 South Stony Island Avenue Chicago, Illinois

May 1995

submitted to

Clean Harbors, Inc. 1200 Crown Colony Drive Quincy, MA 02269

prepared by

VECTOR GROUP, INC.

1118 Ferris Rd. Cincinnati, OH 45102

REMEDIATION OF THE PRIMARY AND SECONDARY SHREDDERS AND DRUM CRUSHER

CLEAN HARBORS AND CWM CHEMICAL SERVICES SITE 11700 South Stony Island Avenue Chicago, Illinois

INTRODUCTION

In February, 1995, Clean Harbors, Inc. (Clean Harbors) authorized Vector Group, Inc. (Vector) to decontaminate and deregulate the primary and secondary shredders and the drum crusher at the CWM Chemical Services, Inc. facility at 11700 South Stoney Island Avenue in Chicago, Illinois. Vector commenced decontamination activities on February 27, 1995. Work was completed on April 1, 1995.

All decontamination activities were performed under the auspices of Vector's nationwide Approval "to decontaminate compressed air systems and appurtenances and metallic pipe appurtenances and equipment" which became effective on February 2, 1993. This Approval was modified and the modified Approval became effective on March 18, 1994. The Approval will expire on January 30, 1998. A copy of the modified Approval is in Appendix A. This remediation project was specifically authorized by Valdas V. Adamkus, the Regional Administrator of USEPA Region V. A copy of this authorization is also included in Appendix A.

Under the terms of Vector's Approval, Vector is required to notify the United States Environmental Protection Agency (USEPA), the EPA Region in which the decontamination activity takes place, and appropriate State and local agencies at least thirty days in advance of any such decontamination activity. On January 6, 1995, Vector notified the USEPA, EPA Region V, the Illinois EPA, Division of Land Pollution Control #24, and the City of Chicago Department of Environmental. A copy of this notification along with cover letters to the various agencies are in Appendix B.

Vector is also required to notify the USEPA and the appropriate EPA Region each week of the anticipated decontamination activity for the following two-week period. Copies of notifications sent to the USEPA, and EPA Region V dated January 23, February 3, February 10, February 17, February 27, March 3, March 10, and March 17 1995 are in Appendix B.

Under the terms of Vector's Approval, PCB contaminated items may be cleaned to a level of less than 100 ug/100 cm² by either processed-based or measurement-based criteria and to a level of less than 10 ug/100 cm² by measurement-based criteria. Clean Harbors chose to have this equipment cleaned to a level of less than 100 ug/100 cm² by a measurement-based process. Items cleaned to this level are subsequently not regulated for disposal or for distribution in commerce and reuse as outlined in Section 4.B. of Vector's Approval. It was later decided that two of the items, the drum crusher and the primary shredder would be sent to a facility in EPA Region VII. The EPA office in Region VII requested that these two pieces of equipment be cleaned to a level of less than 10 ug/100 cm².

To verify that the remediation objective had been achieved, wipe samples were taken from the interior surfaces of the equipment. Sampling was done by Vector personnel under the supervision of Clean Harbors personnel. The wipe samples were analyzed by the laboratory of CWM Chemical Services, Inc. (CWM).

Appendix C contains a copy of the analyses by CWM of the final samples, and a copy of each chain-of-custody prepared by Vector during the decontamination process.

Approximately 3000 gallons of liquid waste and some additional solid waste were generated during the decontamination process. The solid waste consisted of used sock type filters, sorbant pads, visqueen, PPE, and discarded parts. The solid waste was placed in a labeled rolloff for disposal by CWM.

The liquid waste consisted of spent cleaning solution which was placed in a temporary fiberglass storage tank pending disposal by CWM. Appendix D contains copies of the shipping manifests showing that the liquid was sent to the Chemical Waste Management, Inc. facility in Port Arthur, Texas for incineration under TSCA regulations.

Appendix E contains schematic diagrams of each piece of equipment and the sampling locations of the final samples along with the analytical results.

CLEANING PROCEDURE

Primary Shredder

The primary shredder was divided into three segments as follows:

- Segment A, the upper portion of the hopper from the top of the hopper to the hydraulically operated "ram" that is used to force material in the hopper into the shredder teeth.
- Segment B, the lower portion of the hopper, from the "ram" to the shredder tenth.
- Segment C, the lower portion of the shredder from the shredder teeth to the conveyor that removes material from the shredder and the "pan" below the conveyor that collects material and liquid that passes through the conveyor.

To clean each Segment, the Sellers nozzle was placed inside the Segment, and each opening of the Segment to the outside was sealed to prevent leakage. Cleaning solution was pumped from a storage tank through the Sellers nozzle and allowed to drain through the shredder in to Segment C, the collection pan. The cleaning solution was pumped from the collection pan back into the storage tank and recirculated.

Each Segment was cleaned for a minimum of four hours using the Sellers nozzle. While Segments B and C were being cleaned, the shredder teeth were periodically rotated slightly so that all shredder teeth were cleaned. New cleaning solution was used when judged appropriate by the Crew Chief. After each Segment was cleaned, the Sellers nozzle was removed and placed in the next Segment. The cleaning order was from the top to the bottom, that is, Segment A was cleaned first, Segment B second, and then Segment C, to minimize cross contamination. After cleaning with the Sellers nozzle, each segment was sampled. The analyses of the samples indicated that the remediation objective had not been reached, and the cleaning with the Sellers nozzle, the remediation objective had not been reached, and cleaning resumed using high-pressure steam augmented by cleaning by hand.

Cleaning continued until the analytical results from each of the nine sample locations specified by USEPA Region V indicated a PCB concentration less than 10 ug/100 cm². The results are shown on the following table.

SAMPLE LOCATION	SAMPLE NUMBER	ANALYTICAL RESULTS (UG/100 CM ²)
The center of the top-side of the ram	CHI-RA-101	5.13
The center of the under-side of the ram	CHI-RA-97	6.99
The horizontal center of both inside walls which are parallel to the axle of the shredder teeth, at a position 6" above the shredder teeth (composite sample of both walls)	CHI-RA-103	4.03
The horizontal and vertical center of one of the inside walls perpendicular to the axle of the shredder teeth (west wall)	CHI-RA-102	<3.60
Side of the second tooth on east end	CHI-RA-104	2.22
Side of the second tooth on west end	CHI-RA-105	4.66
Side of the center tooth	CHI-RA-106	8.32
If accessible, a sample of the side of the tooth at the opposite end of the access door	Not Accessible	Not Accessible
The housing wall from under the shredder teeth at the midpoint between the teeth and the bottom of the housing	CHI-RA-107	2.47

Secondary Shredder

The secondary shredder was cleaned in one Segment. The Sellers nozzle was placed in the hopper above the shredder teeth, and the top and sides of the hopper were sealed. The cleaning solution was pumped from a storage tank through the Sellers nozzle and allowed to drain through the shredder teeth into a containment tank below the shredder. The cleaning solution was pumped from the containment tank back into the storage tank and recirculated. After cleaning for a total time of 14 hours with the Sellers nozzle, the remediation objective had not been reached, and cleaning resumed using high-pressure steam augmented by cleaning by hand.

Cleaning continued until the analytical results from each of the four sample locations specified by USEPA Region V indicated a PCB concentration less than 100 ug/100 cm². The results are shown on the following table.

SAMPLE LOCATION	SAMPLE NUMBER	ANALYTICAL RESULTS (UG/100 CM ²)
First shredder tooth (north)	CHI-RA-057	14.7
Second shredder tooth (south)	CHI-RA-058	64.1
Third shredder tooth (center)	CHI-RA-059	96.9
The center of one of the inside walls which are parallel to the axle of the shredder teeth	CHI-RA-060	23.35

Drum Crusher

The drum crusher could not be adequately sealed in order to use the Sellers nozzle, and therefore, it was cleaned by steam cleaning and by hand cleaning when necessary.

Cleaning continued until the analytical results from each of the nine sample locations specified by USEPA Region V indicated a PCB concentration less than 10 ug/100 cm². The results are shown on the following table.

FINAL REPORT

REMEDIATION OF THE PRIMARY AND SECONDARY SHREDDERS AND DRUM CRUSHER

CLEAN HARBORS AND CWM CHEMICAL SERVICES SITE 11700 South Stony Island Avenue Chicago, Illinois

May 1995

submitted to

Clean Harbors, Inc. 1200 Crown Colony Drive Quincy, MA 02269

prepared by

VECTOR GROUP, INC.

1118 Ferris Rd. Cincinnati, OH 45102

TABLE OF CONTENTS

	Page
Cleaning Pro	
Appendix A	Vector's Approval
Appendix B	Notifications
Appendix C	Analytical Data
Appendix D	Disposal Data
	Segment Schematic Maps

REMEDIATION OF THE PRIMARY AND SECONDARY SHREDDERS AND DRUM CRUSHER

CLEAN HARBORS AND CWM CHEMICAL SERVICES SITE 11700 South Stony Island Avenue Chicago, Illinois

INTRODUCTION

In February, 1995, Clean Harbors, Inc. (Clean Harbors) authorized Vector Group, Inc. (Vector) to decontaminate and deregulate the primary and secondary shredders and the drum crusher at the CWM Chemical Services, Inc. facility at 11700 South Stoney Island Avenue in Chicago, Illinois. Vector commenced decontamination activities on February 27, 1995. Work was completed on April 1, 1995.

All decontamination activities were performed under the auspices of Vector's nationwide Approval "to decontaminate compressed air systems and appurtenances and metallic pipe appurtenances and equipment" which became effective on February 2, 1993. This Approval was modified and the modified Approval became effective on March 18, 1994. The Approval will expire on January 30, 1998. A copy of the modified Approval is in Appendix A. This remediation project was specifically authorized by Valdas V. Adamkus, the Regional Administrator of USEPA Region V. A copy of this authorization is also included in Appendix A.

Under the terms of Vector's Approval, Vector is required to notify the United States Environmental Protection Agency (USEPA), the EPA Region in which the decontamination activity takes place, and appropriate State and local agencies at least thirty days in advance of any such decontamination activity. On January 6, 1995, Vector notified the USEPA, EPA Region V, the Illinois EPA, Division of Land Pollution Control #24, and the City of Chicago Department of Environmental. A copy of this notification along with cover letters to the various agencies are in Appendix B.

Vector is also required to notify the USEPA and the appropriate EPA Region each week of the anticipated decontamination activity for the following two-week period. Copies of notifications sent to the USEPA, and EPA Region V dated January 23, February 3, February 10, February 17, February 27, March 3, March 10, and March 17 1995 are in Appendix B.

Under the terms of Vector's Approval, PCB contaminated items may be cleaned to a level of less than 100 ug/100 cm² by either processed-based or measurement-based criteria and to a level of less than 10 ug/100 cm² by measurement-based criteria. Clean Harbors chose to have this equipment cleaned to a level of less than 100 ug/100 cm² by a measurement-based process. Items cleaned to this level are subsequently not regulated for disposal or for distribution in commerce and reuse as outlined in Section 4.B. of Vector's Approval. It was later decided that two of the items, the drum crusher and the primary shredder would be sent to a facility in EPA Region VII. The EPA office in Region VII requested that these two pieces of equipment be cleaned to a level of less than 10 ug/100 cm².

To verify that the remediation objective had been achieved, wipe samples were taken from the interior surfaces of the equipment. Sampling was done by Vector personnel under the supervision of Clean Harbors personnel. The wipe samples were analyzed by the laboratory of CWM Chemical Services, Inc. (CWM).

Appendix C contains a copy of the analyses by CWM of the final samples, and a copy of each chain-of-custody prepared by Vector during the decontamination process.

Approximately 3000 gallons of liquid waste and some additional solid waste were generated during the decontamination process. The solid waste consisted of used sock type filters, sorbant pads, visqueen, PPE, and discarded parts. The solid waste was placed in a labeled rolloff for disposal by CWM.

The liquid waste consisted of spent cleaning solution which was placed in a temporary fiberglass storage tank pending disposal by CWM. Appendix D contains copies of the shipping manifests showing that the liquid was sent to the Chemical Waste Management, Inc. facility in Port Arthur, Texas for incineration under TSCA regulations.

Appendix E contains schematic diagrams of each piece of equipment and the sampling locations of the final samples along with the analytical results.

CLEANING PROCEDURE

Primary Shredder

The primary shredder was divided into three segments as follows:

- Segment A, the upper portion of the hopper from the top of the hopper to the hydraulically operated "ram" that is used to force material in the hopper into the shredder teeth.
- Segment B, the lower portion of the hopper, from the "ram" to the shredder tenth.
- Segment C, the lower portion of the shredder from the shredder teeth to the conveyor that removes material from the shredder and the "pan" below the conveyor that collects material and liquid that passes through the conveyor.

To clean each Segment, the Sellers nozzle was placed inside the Segment, and each opening of the Segment to the outside was sealed to prevent leakage. Cleaning solution was pumped from a storage tank through the Sellers nozzle and allowed to drain through the shredder in to Segment C, the collection pan. The cleaning solution was pumped from the collection pan back into the storage tank and recirculated.

Each Segment was cleaned for a minimum of four hours using the Sellers nozzle. While Segments B and C were being cleaned, the shredder teeth were periodically rotated slightly so that all shredder teeth were cleaned. New cleaning solution was used when judged appropriate by the Crew Chief. After each Segment was cleaned, the Sellers nozzle was removed and placed in the next Segment. The cleaning order was from the top to the bottom, that is, Segment A was cleaned first, Segment B second, and then Segment C, to minimize cross contamination. After cleaning with the Sellers nozzle, each segment was sampled. The analyses of the samples indicated that the remediation objective had not been reached, and the cleaning with the Sellers nozzle was repeated. After cleaning for a total time of 18 hours with the Sellers nozzle, the remediation objective had not been reached, and cleaning resumed using high-pressure steam augmented by cleaning by hand.

Cleaning continued until the analytical results from each of the nine sample locations specified by USEPA Region V indicated a PCB concentration less than 10 ug/100 cm². The results are shown on the following table.

SAMPLE LOCATION	SAMPLE NUMBER	ANALYTICAL RESULTS (UG/100 CM ²)
The center of the top-side of the ram	CHI-RA-101	5.13
The center of the under-side of the ram	CHI-RA-97	6.99
The horizontal center of both inside walls which are parallel to the axle of the shredder teeth, at a position 6" above the shredder teeth (composite sample of both walls)	CHI-RA-103	4.03
The horizontal and vertical center of one of the inside walls perpendicular to the axle of the shredder teeth (west wall)	CHI-RA-102	<3.60
Side of the second tooth on east end	CHI-RA-104	2.22
Side of the second tooth on west end	CHI-RA-105	4.66
Side of the center tooth	CHI-RA-106	8.32
If accessible, a sample of the side of the tooth at the opposite end of the access door	Not Accessible	Not Accessible
The housing wall from under the shredder teeth at the midpoint between the teeth and the bottom of the housing	CHI-RA-107	2.47

Secondary Shredder

The secondary shredder was cleaned in one Segment. The Sellers nozzle was placed in the hopper above the shredder teeth, and the top and sides of the hopper were sealed. The cleaning solution was pumped from a storage tank through the Sellers nozzle and allowed to drain through the shredder teeth into a containment tank below the shredder. The cleaning solution was pumped from the containment tank back into the storage tank and recirculated. After cleaning for a total time of 14 hours with the Sellers nozzle, the remediation objective had not been reached, and cleaning resumed using high-pressure steam augmented by cleaning by hand.

Cleaning continued until the analytical results from each of the four sample locations specified by USEPA Region V indicated a PCB concentration less than 100 ug/100 cm². The results are shown on the following table.

SAMPLE LOCATION	SAMPLE NUMBER	ANALYTICAL RESULTS (UG/100 CM ²)
First shredder tooth (north)	CHI-RA-057	14.7
Second shredder tooth (south)	CHI-RA-058	64.1
Third shredder tooth (center)	CHI-RA-059	96.9
The center of one of the inside walls which are parallel to the axle of the shredder teeth	CHI-RA-060	23.35

Drum Crusher

The drum crusher could not be adequately sealed in order to use the Sellers nozzle, and therefore, it was cleaned by steam cleaning and by hand cleaning when necessary.

Cleaning continued until the analytical results from each of the nine sample locations specified by USEPA Region V indicated a PCB concentration less than 10 ug/100 cm². The results are shown on the following table.

SAMPLE LOCATION	SAMPLE NUMBER	ANALYTICAL RESULTS (UG/100 CM ²)
Underside of the north ram plate	CHI-RA-108	<0.36
Underside of the south ram plate	CHI-RA-109	1.77
Crusher floor under the north ram plate	CHI-RA-110	5.8
Crusher floor, southwest corner	CHI-RA-116	2.58
Crusher door, horizontal center, 6" above the bottom	CHI-RA-112	<.36
Crusher door, center	CHI-RA-113	<.36
Crusher wall opposite the door, horizontal center, 6" above bottom (east wall)	CHI-RA-32	9.78
Crusher ceiling	Not applicable	Not applicable
Crusher wall, center north wall	CHI-RA-34	0.75

Miscellaneous Equipment and Parts

In addition to the two shredders and the drum crusher, several miscellaneous pieces of small equipment ant parts were cleaned. These included three electrical boxes and lids, a drum vacuum lid, and seven pumps. These were disassembled when appropriate and cleaned in Vector's small parts washer. Cleaning continued until the analytical results from representative parts of each item indicated a PCB concentration less than 100 ug/100 cm². The results are shown on the following table.

6/27 P.A. equipment routed

SAMPLE LOCATION	SAMPLE NUMBER	ANALYTICAL RESULTS (UG/100 CM ²)
Electric box No. 04434 AH	CHI-RA-052	10.36
Electric Box No. 500836	CHI-RA-072	14.04
Electric Box No. 500836 lid	CHI-RS-051	71.9
Drum vacuum lid	CHI-RA-054	17.99
Small Blue Sandpiper pump	CHI-RA-061	11.23
Yellow Wilden pump	CHI-RA-066	28.4
Yellow Wilden pump	CHI-RA-067	44.1
Wilden M-8 Orange pump	CHI-RA-068	18.82
Electrical box 50086	CHI-RA-070	20.7
Electrical box 50085 lid	CHI-RA-071	52.9
Electrical box 04434 lid	CHI-RA-073	19.73
Orange Wilden pump	CHI-RA-086	51.2
Orange Wilden pump	CHI-RA-099	11.39
Blue Sandpiper pump	CHI-RA-100	57.97

CERTIFICATION

The decontamination of the primary shredder, the secondary shredder, the drum crusher and the miscellaneous equipment and parts conducted by Vector was done, to the best of our knowledge, in accordance with the measurement-based and/or performance-based terms and conditions of the Approval granted to Vector by the USEPA. The analytical results of the decontamination activity at the Clean Harbors/CWM facility show that all PCB items cleaned by Vector were decontaminated under the terms of Vector's Approval to a PCB concentration less than 100 ug/100 cm², or, in the case of the primary shredder and the drum crusher, to a PCB concentration less than 10 ug/100 cm². Under the terms of Vector's Approval, these items are therefore, to the best of our knowledge, unregulated for disposal and are authorized for reuse and distribution in commerce as described in Section 4.B. of Vector's Approval.

APPENDIX A

VECTOR'S APPROVAL



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 77 WEST JACKSON BOULEVARD CHICAGO, IL 60604-3590

FEB 1 5 1995

REPLY TO THE ATTENTION OF:

R-19J

Mr. John M. Heckard Vice President Vector Group, Inc. 1118 Ferris Road Cincinnati, Ohio 45102

Dear Mr. Heckard:

In a letter dated January 24, 1995, M.C. Durfee, Program Manager of Vector Group, Inc. (Vector) described general procedures to decontaminate the primary and secondary shredders and a drum crusher at the CWM Chemical Services, Inc. (CWM-CS) site at 11700 South Stony Island Avenue in Chicago, Illinois, (Enclosure 4). After decontamination, the primary shredder and possibly the drum crusher are intended to be transferred to the Ecova Incinerator, Kimball Thermal Oxidation Facility, in Kimball, Nebraska, for use in a RCRA waste handling operation.

This letter grants approval to Vector to decontaminate the shredders and the drum crusher at CWM-CS in accordance with the general cleaning procedures in Mr. Durfee's letter and in accordance with the additional decontamination and sampling procedures, which are included with this letter as Enclosures 2 and 3, respectively.

In addition, Vector must also follow all applicable conditions of its "Approval to Dispose of Polychlorinated Biphenyls (PCBs), Amended" (hereinafter referred to as nationwide approval [Enclosure 1]) dated March 17, 1994, issued by the United States Environmental Protection Agency (U.S. EPA) Headquarters in Washington, D.C. The applicable conditions of the nationwide approval are noted in Enclosure 2.

This approval is being granted based on a consideration that the demonstration tests associated with Vector's nationwide approval were audited and inspected by representatives of U.S. EPA Headquarters, during which the efficacy of the Vector process was verified. In addition, this approval is based upon U.S. EPA's conclusion that Vector's PCB disposal activities, as demonstrated to U.S. EPA Headquarters, did not present an unreasonable risk of injury to public health or the environment.

Representatives of the U.S. EPA may be on site during the decontamination to observe the procedures and verify results by splitting samples, where applicable.

It is your and Vector's responsibility to ensure that all applicable provisions of the TSCA and the Federal PCB regulations are followed. This authorization does not relieve Vector of the responsibility to comply with all other Federal, State and local regulations and ordinances for the decontamination of the above equipment. In addition, prior to commencing decontamination, Vector shall obtain any necessary Federal, State or local permits or approvals.

Prior to transferring either shredder or drum crusher off site, or prior to reuse of the equipment in a non-PCB process, a summary of the post decontamination sampling results should be submitted to Tony Martig, of my staff, at the above address, in the PCB Control Section/SP-14J.

Please contact Mr. Martig at (312) 353-2291 if you have any questions pertaining to this authorization.

Sincerely yours,

Valdas V. Adzakus U Regional Administrator

Enclosures

VECTOR GROUP, INC.

Compressed Air Systems and Metallic Pipe Approval to Dispose of PCBs, Amended

EXECUTIVE SUMMARY

This permit grants Vector Group, Inc. (Vector) the approval by the United States Environmental Protection Agency (USEPA) to decontaminate compressed air systems and appurtenances and metallic pipe appurtenances and equipment either by a performance-based or a measurement-based process. The process uses Vector Group Mobile PCB Decontamination Units (VGMDU).

Once decontaminated by Vector's process, cleaned items are unregulated for disposal, reuse or sale, according to the terms stated in the Approval.

The Approval authorizes Vector to remove PCBs from the following:

- Metallic pipe up to 8 inches in diameter by flushing
- Metallic pipe up to 36 inches in diameter by spraying
- Air receiver tanks
- Miscellaneous parts and appurtenances

The Approval consists of twenty-five (25) sections, each of which is briefly outlined below. The critical portions of the Approval are Sections 4, 5, and 6. Section 4 describes how items cleaned by Vector's process can be disposed of or reused. Section 5 describes performance-based cleaning, and Section 6 describes measurement-based cleaning.

Section 1. Advance Notification

Vector's process may be either a mobile operation (less than 180 days per site), or a permanent operation (180 days or longer per site). Vector must notify the USEPA, the appropriate Regional EPA office, and certain State and local authorities thirty (30) days in advance of operations.

Section 2. Agency Approvals or Permits

Vector must obtain any necessary Federal, State or local permits required, and must abide by any applicable Federal, State and local regulations.

Authorized Use of the Vector Mobile PCB Decontamination Unit Section 3. Vector may use its process to clean:

- Compressed air systems, including: Air receiver tanks (ARTs) Compressed air piping Miscellaneous parts and appurtenances
- Metallic piping used for purposes other than compressed air systems if the piping is 36 inches in diameter or less.

This process is an alternative to disposal in a TSCA-approved incinerator, or TSCA-approved landfill. Decontamination criteria shall be either performance-based or measurement-based.

Section 4. Disposal/Reuse of Decontaminated Material

Items cleaned by either the performance-based or the measurement-based process will be placed in one of the following categories:

PCB SURFACE CONCENTRATION

\Rightarrow 100 ug/100 cm² (which is the same as \Rightarrow 1 ug/cm²)

 $< 100 \text{ ug/}100 \text{ cm}^2 \text{ but} > 10 \text{ ug/}100 \text{ cm}^2$ (which is the same as $< 1 \text{ ug/cm}^2$, but $> 0.1 \text{ ug/cm}^2$

< 10 ug/100 cm² (which is the same as $< 0.1 \text{ ug/cm}^2$

REGULATORY STATUS

Regulated by EPA under TSCA

Unregulated for disposal, authorized for reuse and distribution in commerce in a natural gas pipeline system or for transport of hydrocarbons, natural gas, chemical or petrochemical products, casing for secondary containment, industrial structural material, flume pipe, equipment skids, culverts, sewage service, steam service, irrigation systems, and enclosed compressed air systems.

Unregulated for disposal; unregulated for distribution in commerce and reuse except where associated with food, feed or drinking water.

Section 5. Performance-Based Cleaning of Compressed Air Systems and Metallic Pipe

The performance-based process using the equipment and cleaners described can be used for cleaning air receiver tanks, metallic pipe, and large parts to levels of < 100 ug/100 cm², and

small parts and appurtenances to levels of < 10 ug/100 cm², and the cleaned items will be unregulated according to the conditions of Section 4.

Section 6. Measurement-Based Cleaning of Metallic Pipe, Compressed Air Systems and Air Receiver Tanks

The measurement-based process using the equipment and cleaners described can be used for cleaning air receiver tanks, metallic pipe and parts and appurtenances to levels of < 10 ug/100 cm², and the cleaned items will be unregulated according to the conditions of Section 4.

Section 7. Feedstock Quality and Restrictions

Cleaners may contain no more than 50 ppm of PCBs prior to use.

Section 8. Disposal of VGMDU Aqueous Liquids, (Process Water and Spent Cleaner)

All liquids that have been in contact with any PCB articles and that have a PCB concentration greater than 3 ppb shall be filtered through an activated carbon filter until the PCB concentration is less than 3 ppb. The liquids must have a pH in the range of 6 - 9. When these conditions are met, the spent cleaner may be sent to a POTW facility or an industrial waste water treatment facility which has a NPDES permit, or to a RCRA approved disposal facility.

Section 9. VGMDU Decommissioning/Malfunction

Items that are not adequately cleaned by the Vector process must be disposed of as if they were at their original level of contamination.

Section 10. VGMDU Process Waste Restrictions

All generated wastes such as filter bags, sludge, rags, effluent, etc., shall be treated or disposed of as if they contained the PCB concentration of the original source.

Section 11. VGMDU Process Monitoring/Recordkeeping

Vector shall keep adequate and detailed records of all activities.

Section 12. PCB Releases

Any PCB spills or releases must be immediately contained and cleaned up and reported to the appropriate authorities.

Section 13. Safety and Health

Vector shall comply with all applicable safety and health standards.

Section 14. Facility Security

Access to the VGMDU shall be controlled.

Section 15. Reporting

Any reports required by other conditions must be submitted within the specified time frame.

Section 16. Personnel Training

Vector supervisory personnel must be familiar with this permit and the types of items that may be treated, basic recordkeeping requirements, notification requirements, waste disposal requirements and reporting requirements.

Section 17. Equipment Transport

PCB-contaminated equipment shall be transported off-site in accordance with 40 CFR Section 761.4 and the U.S. Department of Transport requirements of Title 40 Part 172.

Section 18. Financial Assurance

Vector shall provide funds for the proper closure of the VGMDU and for compensating others for bodily injury and property damage caused by accidents arising from operations of the VGMDU.

Section 19. Additional VGMDU

Vector must file a written pre-operation report for each new VGMDU which is to be operated in the United States.

Section 20. VGMDU Process/Equipment Modifications

No major modifications may be made to the VGMDU without written approval.

Section 21. Ownership Transfer

Vector must notify the EPA at least 30 days before transferring ownership of the VGMDU process.

Section 22. Approval Severability

If any provision of this permit is invalid, the remainder of the permit shall not be affected.

Section 23. Approval Expiration Date

This permit shall expire on January 30, 1988.

Section 24. Compliance with Federal Regulations

Vector shall comply with all applicable requirements of the Federal PCB Regulation, 40 CFR Part 761.

Section 25. Previous Approvals

This approval shall supersede all previous USEPA or amendments for the VGMDU process.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

MAD 17 1994

OFFICE OF PREVENTION, PESTICIDES AND TOXIC SUBSTANCES

Mr. John M. Heckard Vice President Vector Group, Inc. 7456 Jager Court Cincinnati, Ohio 45230

Dear Mr. Heckard:

Enclosed is a document entitled "Approval to Dispose of Polychlorinated Biphenyls (PCBs), Amended." The enclosed approval authorizes Vector Group, Inc. (Vector) to remove PCBs from natural gas pipeline pipe (up to 8 inches in diameter), appurtenances, and air receivers. The Office of Pollution Prevention and Toxic (OPPT) has reviewed results from the Vector's demonstration test report submitted on September 22, 1993.

The demonstration test for disposal of PCB contaminated water occurred from July 26-30, 1993. The results from the demonstration indicated that Vector can successfully clean natural gas pipeline pipe (8 inch or less diameter), appurtenances and air receiver tanks to levels of between 0.1 and 1 microgram per cm².

EPA had audited and inspected the Vector operations during the demonstration and verified the efficacy of the Vector process. EPA certified chemical analysis of the on-site laboratory. During the July 26-30, 1993 demonstration, split wipe samples of the natural gas pipeline pipe and appurtenances were collected for analytical confirmation by Midwest Research Institute (MRI).

The approval is based upon the ability of the Vector Procedures to safely and effectively perform the above-mentioned disposal activities on facilities which had historically contained PCB condensate without such disposal activities resulting in environmental release of PCB containing condensate. In addition, the approval is based upon the Agency's conclusion that the PCB disposal activities as demonstrated to EPA and performed according to Vector Procedures do not present an unreasonable risk of injury to public health or the environment.

The Vector PCB removal approval to operate nationwide shall become effective upon signature of the Director of the Chemical Management Division of the Office of Pollution Prevention and Toxics (OPPT) and shall be effective until January 30, 1998. The approval may be withdrawn, or further conditions may be added to it



at any time EPA has reason to believe that operation of the Vector Procedures present an unreasonable risk of injury to public health or the environment. EPA reserves the right to withdraw this approval or impose further conditions as the result of future EPA rulemaking with respect to PCBs. Moreover, violation of any condition included as part of this approval may subject Vector to enforcement action and/or suspension or revocation of the approval.

It is the responsibility of Vector Group, Inc. to comply with all applicable provisions of TSCA and the Federal PCB Regulations in cleaning and removing the natural gas pipeline, metering stations and compressor stations as specified in the approval. Violation of any applicable provisions or conditions of the approval, EPA's determination of misrepresentation of material fact in the application and support material, or demonstrations of past willful and knowing violations of environmental regulations may be cause for recision of this approval. Furthermore, this approval does not relieve Vector of the responsibility to comply with all other applicable Federal, State and local regulations and ordinances for transportation, siting, operation, disposal of wastes, and maintenance of the Vector Procedures.

EPA reserves the right to inspect Vector Group Inc. natural gas pipeline cleaning, metering stations and compressor station PCB removal projects and the records which Vector is required to maintain under the Federal PCB Regulations and this approval during operation and at other reasonable times.

Vector has filed with the Director, Chemical Management Division, a closure plan, closure cost estimates, and financial assurance mechanism. EPA has not completed its review of these documents. Following EPA review, should Vector receive a Notice of Deficiency for any or all of these documents, Vector shall have thirty days to satisfactorily address all deficiencies or this approval is automatically suspended on the thirty first day. Within thirty days of receipt by Vector of a Notice of Acceptance for the closure plan, closure cost estimates, and financial assurance mechanism, Vector shall have its financial assurance mechanism in place in full force and effect or the approval is

automatically suspended on the thirty first day. Vector may request an extension from OPPT for either of these deadlines. EPA considers financial assurance a critical condition in this approval.

Please contact John Smith of my staff at (202) 382-3964 if you have any questions pertaining to this approval.

Sincerely,

John W. Melone, Director Chemical Management Division

Enclosure

cc: Regional Administrators
Regions I - X

Regional PCB Coordinators Regions I - X

Chris Zerby, Federal Energy Regulatory Commission

Enclosure

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

IN THE MATTER OF
VECTOR GROUP, INC.
1118 FERRIS RD.
CINCINNATI, OH 45102

APPROVAL TO DISPOSE OF POLYCHLORINATED BIPHENYLS (PCBs)

AUTHORITY

This approval is issued pursuant to Section 6 (e) (1) of the Toxic Substances Control Act of 1976 (TSCA), Public Law No. 94-469, and the Federal PCB Regulations, 40 CFR 761.60 (e) (48 CFR 13185, March 30, 1983). Background and Findings related to this approval are attached as Appendices I and II.

EFFECTIVE DATE

Vector Group, Inc. (Vector) is the sole owner and operator of a solvent extraction process using Vector Group Mobile PCB Decontamination Units (VGMDU), where PCBs are removed from items and equipment including metallic piping and air compressor systems, using one or more mobile units. Pursuant to 40 CFR 761.60 (e) and when operated in accordance with the conditions of this approval, EPA finds that the Vector process is equivalent to an approved incinerator for the disposal of PCBs in metallic pipe, air receivers and associated air compressor appurtenances and that use of the VGMDU process does not pose an unreasonable risk of injury to human health or the environment.

This nationwide approval to decontaminate compressed air systems and appurtenances and metallic pipe appurtenances and equipment shall become effective on the date of signature by the Director of the Chemical Management Division of the Office of Pollution Prevention and Toxics and shall expire January 30, 1998.

CONTENTS

Authority

Effective Date

Definitions

Conditions of Approval

- 1. Advance Notification
 - a) Overview
 - b) Mobile Operations
 - c) Permanent Operations
 - d) Requirements for changing from Mobile Operations Mode to Permanent Operations Mode
- 2. Agency Approvals or Permits
- 3. Authorized Use of the VGMDU
- 4. Disposal/Reuse of Decontaminated Materials
- 5. Performance-Based Cleaning of Compressed Air Systems and Metallic Pipe
 - a) Air Receivers
 - b) Metallic Pipe
 - c) Appurtenances
- Measurement-Based Cleaning of Metallic Pipe, Compressed Air Systems and Air Receiver Tanks.
 - a) Miscellaneous Air Compressor System Parts
 - b) Metallic Piping
 - c) Air Receiver Tanks
- 7. Feedstock Quality and Restrictions
- 8. Disposal of VGMDU Aqueous Liquids (Process Water and Spent Solvent)
- 9. VGMDU Decommission/Malfunction
- 10. VGMDU Process Waste Restrictions
- 11. VGMDU Process Monitoring/Recordkeeping
- 12. PCB Releases
- 13. Safety And Health
- 14. Facility Security
- 15. Reporting
- 16. Personnel Training
- 17. Equipment Transport
- 18. Financial Assurance
- 19. Additional VGMDU
- 20. VGMDU Process/Equipment Modifications
- 21. Ownership Transfer
- 22. Approval Severability
- 23. Approved Expiration Date
- 24. Compliance with Federal Regulations
- 25. Previous Approvals

Approval Appendices

I. Background

II. Findings

III. Sample Notifications Form(s)

IV. Sellers Nozzle Data

<u>DEFINITIONS</u>

"Analytical data" means (a) a formal report from a chemical analysis laboratory or (b) appropriate chemical instrument printouts with appropriate controls, standards, and written instrumental operating parameters and conditions, or (c) a statement that the "assumption" rule has been used. Technical judgement or experience is not considered analytical data.

"Appropriate local jurisdiction" means the incorporated city where the Vector Group Mobile PCB Decontamination Unit (VGMDU) may be operated, or the county, if the VGMDU will be operated outside the boundary of an incorporated city.

"Appurtenances and or Equipment" means any equipment other than air compressors, receiver tanks and piping. Examples of appurtenances are valves, regulators, disassembled air compressors, tools and other parts and fittings.

"Business hours" means 8:00 a.m. to 5:00 p.m. local time on weekdays except United States Government Holidays.

"Cleaning Agent" means either a 5% solution of sodium hydroxide, a 2% solution of Cimclean 30_{TM} , or a 2% solution of LP 969_{TM} .

"Day" means a calendar day, unless otherwise specified.

"Disposal" means any removal of PCBs from compressed air systems and metallic pipe and then treating or sending off any type of PCB wastes or materials generated during the VGMDU process.

"Duplicate analysis" means two gas chromatographic analyses of the analyte prepared from one wipe sample.

"Frequent site changes" means site changes at a rate of more than once per week.

"Job" means all Vector disposal operations for a single customer within fifty road miles of a central location. A job may consist of Vector disposal operations at several different sites for a single customer.

"Lifetime exposure risk" means the risk to an average adult individual who is exposed to a stated average concentration of a toxic material daily over the course of a 70 year lifetime.

"Lost time injury" or "Lost workday injury" means an injury related to the operation of the VGMDU process which results in an

employee not performing his/her normal assignments during the workday and/or any successive workday(s) following the day of the injury.

"Major modification" means any change to capacity, design, or efficiency of the VGMDU process, change of waste type, or any other changes significantly affecting overall performance or environmental impact.

"Metallic Pipe or Metallic Piping" means any piping constructed from metallic materials that is contaminated by PCBs.

"Minimal" with regard to an amount of PCB wastes means less than ten percent (10%) of total wastes treated.

"Mobile operations" means those operations where the VGMDU remains at a site for less than 180 consecutive days.

"Operations" means the VGMDU process of removing PCBs, treating spent cleaning solutions on site, and sending off PCBs for disposal, including set up and take down of the VGMDU as well as actual treatment.

"OPPT" means the Office of Pollution Prevention and Toxics (TS-792); (202) 260-3815; Operations Branch (TS-798); (202) 260-3933; Facsimile (202) 260-1724.

"PCB" means polychlorinated biphenyls as defined in 40 CFR 761.3.

"PCB release" and "PCB spill" have the same meaning as "spill" as defined in EPA's PCB Spill Cleanup Policy in 40 CFR 761.123.

"Permanent operations" means those operations where the VGMDU remains at a site for 180 consecutive days or longer.

"Process Failure" means the inability of the VGMDU to remove PCBs from compressed air systems and metallic piping and appurtenances.

"Site" means the geographically contiguous property unit (such as a single manufacturing plant) at which the Vector PCB disposal operations are conducted. More than one compressed air system or pipe segment may be serviced at a single site.

"Site location" means a street address or a directional description which would allow a site to be found by an EPA inspector.

"Year" means 365 days.

CONDITIONS OF APPROVAL

1. Advance Notification

a. <u>Overview</u>

Vector shall provide a nonconfidential, advance written notification of intent to operate to be received by the addressees (as described below) prior to the conduct of a permitted PCB disposal activity. The addressees shall include, at a minimum: the Chief of the PCB Disposal Section in EPA Headquarters' Office of Pollution Prevention and Toxics (Mail Code: TS-798), the appropriate EPA regional office, the appropriate state agency, and the appropriate local jurisdiction.

The type of written advance notification requirements is dependent upon the length of time a VGMDU is at a single site. The two categories are listed below and advance written notification requirements follow:

Mobile Operations

Permanent Operations

The information which must be included in the advance written notification for each category is described in sections 1.b.-1.d. below. Advance notification requirements may be waived at Superfund sites according to 121 (e) of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) and its implementing provisions at (40 CFR 300.400 (e).

b. Mobile Operations

- (1) The following information must be included in a 30-day advance written notification to the addressees required to be notified under 1.a. The information is provided for public information purposes and for facilitating scheduling of government compliance monitoring and oversight of PCB disposal operations.
 - A. Company identification: Vector's and client's names including primary individuals names and telephone numbers.
 - B. Names, titles, addresses, and telephone numbers of the addressees required to be notified by 1.a.

- C. The nature of the PCB disposal activity, including estimates of the amount and type of PCB material (number of air receivers, appurtenances and piping to be treated) and estimates of the surface and/or condensate concentration of PCBs on and/or in (respectively) the material. The estimates shall be based on any one or combination of the following:
 - i. Analytical data or the results of analytical data provided by the customer; or
 - ii. Vector analytical data.
- D. The site location(s) and a telephone contact(s).
- E. The time(s) and date(s) that the PCB disposal activity is scheduled to take place.

An acceptable sample form for the 30-day advance written notification of intent to operate under mobile operations is included as Appendix III A.

- (2) For Vector operations under Mobile Operations where there are frequent site changes, the following additional notification is required:
 - A. Every week Vector shall provide by telephone facsimile transmission, a two-week activity schedule to the OPPT and the EPA regional contact for each region where a PCB disposal activity will occur. This two-week activity schedule shall include for each job:
 - i. EPA region where the VGMDU will be located;
 - ii. Most probable date that the VGMDU will be performing PCB disposal activities;
 - iii. The time(s) and date(s) the PCB
 disposal activity is scheduled to take place;
 - iv. The expected number of sites; and
 - v. Either:
 - (a) the county or counties where PCB disposal activities will occur, or

(b) a notice that the VGMDU will operate within a 50-mile radius of a specific location identified by a client telephone contact and client address.

An acceptable sample form for the two-week activity schedule under mobile operations is included as Appendix III B.

B. If a change in the most probable operating date or a change in scale for a job is made more than 2 days in advance of the most probable operating date, as stated in the most recent two-week activity schedule transmitted to EPA, Vector must send a telephone facsimile message noting the change to the appropriate EPA regional contact at least 2 days in advance of the most probable operating date, as stated in the two-week activity schedule.

If the change in the most probable operating date or the change in scale is made 2 days or less in advance of the most probable operating date, as stated in the most recent two-week activity schedule transmitted to EPA, then the next scheduled telephone message update shall include the change.

- C. Vector shall operate a recorded message system accessible 24 hours a day by EPA Regional Compliance Monitoring staff and OPPT staff. The recorded message must include the following information for each of VGMDU's operations in the United States:
 - i. site location (street address or directional description), client contact and phone number;
 - ii. scheduled completion date of current job; and
 - iii. company identification and scheduled start date of next job.

The message shall be updated daily between 7:30 a.m. and 8:30 a.m. EST/EDT and between 4:30 p.m. and 5:30 p.m. EST/EDT on weekdays (except for official U.S. Government holidays). If this recorded message is considered confidential business information, the message may be accessed by a code distributed to the EPA regional contacts and OPPT officials below.

Samples of acceptable forms for the required notifications under Mobile Operations are included in Appendix III. Other forms providing equivalent information may be used.

EPA REGIONAL CONTACTS

Name, Region	Telefax Number	Contact Number
Winston Lue, EPA Headquarters Kim Tisa, Region I Dan Kraft, Region II Charlene Creamer, Region III Stuart Perry, Region IV Priscilla Fonseca, Region V Donna Mullins, Region VI Doug Elders, Region VII Dan Bench, Region VIII Russ Kemmerer, Region IX Bill Hedgebeth, Region X	(202) 260-1724 (617) 565-3468 (201) 321-6788 (215) 597-3156 (404) 347-1681 (312) 886-2591 (214) 655-2136 (913) 551-7065 (303) 293-1732 (415) 744-1074 (206) 442-0110	(202) 260-3933 (617) 565-3279 (201) 321-6669 (215) 597-4651 (404) 347-3864 (312) 886-1334 (214) 655-7244 (913) 551-7020 (303) 293-1443 (415) 744-1116 (206) 442-7369

c. <u>Permanent Operations</u>

Vector must submit an advance written notification of permanent operations to the addressees at least 180 days in advance of the proposed Permanent Operations at a site. When a VGMDU is to be operated at a site for 180 consecutive days or more, the following information must be included in the notification and verified by EPA to conform to the informational requirements before the 180-day review period can begin. This advance written notification shall include a site evaluation and must include the following:

- (1) All information required under items 1.b. (1) through (5) of Mobile Operations.
- (2) Additional information presented below:
 - A. estimates of fugitive emissions of PCBs and any other hazardous materials;
 - B. amounts of waste generated during the entire operation and how that waste will be disposed;
 - C. plans of action in case of an emergency (including arrangements with local fire fighters, law enforcement personnel, and public health officials);
 - D. site-specific spill prevention control and

countermeasures (SPCC) plan or containment installations and procedures; and,

E. site cleanup or restoration procedures and copies of any bonds which may be required by a state or local authority or by the client for the Vector operations.

(3) Details of the Site Evaluation

The following information must be submitted to OPPT and the appropriate EPA region as part of a notice of intent to operate a VGMDU at a site for 180 consecutive days or longer. A public notice will not be published until a complete submission of these requirements has been received and approved by EPA.

There are a number of details which were submitted to EPA as part of the original PCB disposal permit application which must be updated or revised. All of these details are directly or indirectly related to the site of operations.

A. Project Personnel

A list of names and an organizational chart, brief job description, and responsibilities for all staff to be employed by the permittee at the proposed site. In addition, names, mailing addresses, and telephone numbers of primary Vector contacts with EPA, such as environmental affairs managers or government liaison contacts. Job qualifications and training, including the time, frequency and content, must be included.

B. Facility Description

The facility description shall include details of the disposal operations as they apply to the physical layout at the disposal site. To be included are (1) a site layout, to scale, of the location where operations will occur, and (2) the location of safety equipment, including but not limited to fire protection equipment, disposal equipment, supplies, waste handling equipment, waste loading and unloading points for transportation, flood proofing protection structures, security structures.

previously developed site, in addition to the above requirements, other site modifications must be described and justified. Buildings for personnel, construction, maintenance and laboratories are exempted, unless there are discharges from operations of a VGMDU to the environment. Laboratory vents, sewer discharges from the laboratory or any area that may be associated with any contact with PCBs or any hazardous waste handled or generated as the result of PCB disposal must be discussed. Also, discussions of all storage facilities and their containment, VGMDU process water systems, and other waste stream processing shall be included.

C. Disposal Activities to Be Conducted On-Site

A summary of the VGMDU process operations which are described in detail in the original permit application shall be submitted, not to exceed one typewritten single spaced page. permittee shall discuss activities and the amount of time involved in setting up and taking down disposal operations of the MDU at the site. the permittee shall provide a discussion of: monthly and annual amounts and concentrations of waste; amounts and concentrations of PCBs and other hazardous materials stored on site; amounts and concentrations of contained, controlled, and fugitive emissions of toxic and non-toxic materials and how contained materials will be disposed of; proposed hours of operations; and expected duration of disposal activities at the site.

D. Safety Measures

The permittee must describe systems and/or structures for the detection and/or containment of leaks and hazardous wastes/by-products must be described, including VGMDU process shutdowns resulting from automated monitoring of process emissions. A brief discussion of the automatic process controls, such as those which control extreme pressure fluctuations or departure from a permitted range, must be included. The location and action plans for all other emergency equipment shall be provided. Maintenance plans and schedules shall be provided. Safety and/or quality control/quality assurance inspection schedules, procedures, and recordkeeping must be detailed.

E. Emergency Preparedness and Contingency Plans

Emergency preparedness plans must be submitted to local authorities and approved by the EPA region. These plans shall include (1) exactly what actions take place for each level of problem, (2) the names of the persons responsible for handling expected problems, and (3) facility personnel names and appropriate phone numbers for 24-hour a day contact in the event of an emergency. Frequent problems and reasonable worst case problem scenarios such as: spills during VGMDU processing, storage, and transportation; fire; floods; and equipment malfunction resulting in personal injury must be addressed. The information shall include (1) names and phone numbers of fire, police, medical emergency contacts, and (2) training sessions, documents, or other information provided to these services.

F. Transportation Routes and Volumes to be Transported to the Site

Transportation route information shall be detailed if such routes include any roads other than interstate highways. Information shall include residential or commercial areas associated with the roads to be used by hazardous waste transporters. Information on the on-site and offsite storage of materials (including but not restricted to locations, brief description of the release control/containment measures at the storage facility, and the estimated time to be stored at the location), shall also be listed.

G. Financial Assurance and Closure

The permittee shall summarize the financial assurance and closure provisions from the permit application including what situations are covered by insurance or other financial assurance and the amount of the assurance. Additional financial assurance and closure provisions for the time of extended PCB disposal operations at the site must be described in detail.

H. Exposure Assessment

An exposure and risk assessment shall be provided for activities included in normal VGMDU operations and in the event of reasonable worst case accidents/problems. The exposures shall include those resulting from: storage, contained and fugitive emissions, handling and processing

PCBs and other hazardous waste/process materials, operation of industrial equipment and transportation related releases such as spills and collisions.

The information shall include an assessment of risk to the public from:

- i. lifetime exposure to VGMDU operations;
- ii. the transport of PCB waste from the site; and,
- iii. on-site storage of PCB waste for disposal.

Situations which are not considered reasonable worst case situations are a double tornado, a terrorist attack, a nuclear strike, a plane crash into the facility, a meteor strike, and damage from an earthquake when there is not an active major geological fault near enough to expect major plant facility damage and release of PCB material.

(4) Public Participation

Vector shall provide a public notice in the local newspaper initiating a 30-day comment period for public review of appropriate permit related documents (such as the sanitized non-confidential business information) permit application, any existing PCB disposal permit, any existing draft revised PCB disposal permit, and the site evaluation). The notice shall also advise that, if EPA determines that there is sufficient public interest, a public meeting will be held on a specified date and at a specified place and time not more than 45 days after the initial public notice.

After Vector has given the EPA regional office, the state agency, and the local jurisdiction a notice of intent to operate at a site for at least 180 consecutive days or more, and once OPPT and the local EPA region are satisfied that the site specific information submitted in this notice meets the requirements set forth in paragraphs (1), (2) and (3) above, a 180-day public notification and review process shall begin. A sample notification is attached as Appendix III D.

Based on the comments and questions received

during the 30-day comment period, the EPA region will determine whether a public meeting is necessary. The public meeting shall be held: (a) to discuss comments made by the public during the 30-day comment period and notification for the public meeting; (b) to allow the public to make comments on the proposed operations and site; and (c) to allow the public to ask questions of EPA representatives on the proposed operations.

The public meeting will be hosted by the OPPT. OPPT and the EPA region may collectively determine what the schedule and the agenda for the public meeting shall be.

Not more than 150 days after the close of the public comment period, EPA shall make a decision on the authorization of Permanent Operations and on what additional conditions, if any, shall be imposed on the Vector Permanent Operations. The decision will be based on review of comments during the 30-day comment period and comments made during the public meeting. The decision could be that Vector may begin operations without additional permit conditions, or the decision could be made to require additional site-specific permit conditions which must be met before Permanent PCB Disposal Operations may begin at the site.

d. Requirements for Changing from Mobile Operation Mode to Permanent Operation Mode

Whenever a VGMDU originally projected to be located at a single site for less than 180 consecutive days as Mobile Operations, at some point before 180 consecutive days into the operations Vector determines that the VGMDU will be located at the site for 180 consecutive days or longer, Vector must proceed as follows:

- (1) Vector must immediately provide written and telephone notification of this change to the EPA Headquarters' Office of Pollution Prevention and Toxics (OPPT) and the appropriate EPA regional office.
- (2) Upon submission of this notification, Vector shall cease PCB disposal operations after the 180th consecutive day unless Vector provides OPPT and the EPA regional office a site evaluation, which includes all information prescribed in sections c.(1) (3) above. The information must include updated material for the operation in question, including any modifications, to allow EPA to consider operations for the time period beyond the 180 consecutive days.

- (3) Upon review and acceptance of the site evaluation, Vector must provide for public notice of the applications for approval and a 30-day comment period along with an opportunity for a public meeting or hearing as described in section 1.c.4 above.
- (4) When the comment period is concluded, OPPT and the regional office will determine, in its discretion, that operations may proceed beyond 180 consecutive days. EPA will notify Vector in writing of its approval to operate beyond 180 consecutive days.

2. Agency Approvals or Permits

Prior to commencing operations, Vector shall obtain any necessary Federal, State or local permits or approvals. During the course of operations, Vector shall comply with all conditions and requirements of such permits or approvals. Copies of such permits shall be forwarded to the Chief, PCB Disposal Section (TS-798) EPA Headquarters. Waste materials containing PCBs in the concentration range of approximately 200 ppm of PCBs may also contain levels of hexachlorobenzene at levels regulated for disposal under the Toxicity Characteristic Revisions (55 Federal Register, 11796, March 29, 1990 of the Resource Conservation and Recovery Act (RCRA) regulations.

This Approval does not shield Vector from all applicable Federal, State and Local regulations and ordinances.

3. Authorized Use of the Vector Mobile PCB Decontamination Unit

Vector is authorized to use its Mobile PCB Decontamination Unit (VGMDU) including its extraction solvent process to clean compressed air systems, which include air receiver tanks, the piping between the compressor and the air receiver tanks; the piping between the receiver tanks and other compressor station equipment such as instruments and tools driven by compressed air; disassembled air compressors; and miscellaneous valves, controllers and fittings associated with compressed air system. In addition, Vector is authorized to use its VGMDU to clean metallic piping used for purposes other than compressed air systems if the metallic piping is 36 inches in diameter or less. The use of the VGMDU process to clean compressed air systems and associated parts, and other metallic piping is an alternative to disposal of the systems in a TSCA-approved incinerator or TSCAapproved landfill. Decontamination criteria shall be according to either performance- based procedures as described in Condition 5 or measurement-based conditions as described in Condition 6 below.

4. <u>Disposal/Reuse of Decontaminated Material</u>

Air compressor systems and appurtances and metallic pipe which have been decontaminated according to the measurement-based conditions described in Condition 6 below, and which have been wipe sampled according to Condition 6 and the wipe samples analyzed according to approved chemical analysis methodologies shall be placed into one of the disposal categories below based on the analytical results.

Air compressor systems and appurtances and metallic pipe which have been decontaminated according to the performance-based conditions described in Condition 5 shall be placed into one of the disposal categories below based on the completion of the performance-based procedures.

A. Disposal/Reuse of metallic pipe and appurtenances having PCB surface concentrations of equal to or greater than 1 ug/cm².

Metallic pipe and appurtenances, removed from service and having surface concentrations greater than 1 ug/cm² as determined by EPA approved, statistically based wipe sampling are regulated for disposal. Regulated, removed PCB pipe and equipment shall be stored and disposed of according to 40 CFR 761.65 and 761.60.

B. Disposal of metallic pipe and appurtenances having PCB surface concentrations between 0.1 ug/cm^2 and less than 1 ug/cm^2 .

Metallic pipe and appurtenances which has been verified to meet the designated 1 ug/cm² cleanup level, but is above 0.1 ug/cm², shall be unregulated for disposal, but authorized for reuse and distribution in commerce only in a natural gas pipeline system and/or a compressed air system or as described below:

- any transport of hydrocarbons, natural gas, chemical or petrochemical products.
- as a casing to provide secondary containment under highways, railroads, or other transportation systems.
- industrial structural material such as fence posts, sign posts, gate posts, cross structures, and bridge supports.
- -temporary flume pipe used during construction.
- Equipment skids.
- permanent culverts in non continuous flow situations

not to exceed 80 feet in length.

- sewage service with written consent of POTW.
- -steam service
- irrigation systems less than 200 miles in length where pipe is less than 20" in diameter.
- enclosed compressed air systems.
- C. Disposal of metallic pipe and appurtenances having PCB surface concentrations of less than 0.1 ug/cm².

Metallic pipe and appurtenances having surface level concentrations below 0.1 ug/cm² are not regulated for disposal or distribution in commerce and reuse except where those uses are associated with food, feed or drinking water.

Failure to clean any regulated metallic pipe, compressed air system, or its components to the 1 ug/cm² level, or to the 0.1 ug/cm² level in a measurement-based procedure, subjects the equipment to TSCA use, distribution in commerce, and disposal requirements based on the measured concentration of PCBs prior to decontamination. However, an EPA consent agreement/decree may require/allow surface levels or residual PCB levels other than those authorized by this approval. The procedures for determining whether or not the VGMDU process has met the specific surface level requirements for a measurement-based procedure are described in Condition 6.

5. <u>Performance-Based Cleaning of Compressed Air Systems and</u> Metallic Pipe

In Condition 3, the VGMDU is authorized to use its extraction solvent process to clean compressed air systems and metallic pipe and associated equipment. The VGMDU was demonstrated to clean the above mentioned equipment to levels of 10-100 microgram per 100 square centimeters under specific operations conditions shown below. The regulatory status of such equipment is described under Condition 4.

a. Air Receiver Tanks

The VGMDU process operated as below is approved to clean air receiver tanks. The performance of the VGMDU operated as below has cleaned surfaces to less than 100 micrograms per 100 square centimeters, which is the same as one microgram per square centimeter (1 ug/cm²) but not less

than 10 micrograms per 100 square centimeters (0.1 ug/cm²).

Approved operations for air receiver tanks, which have been demonstrated to achieve surfaces cleaned to between 0.1 to 1 ug/cm^2 , shall include the following equipment operating at the following limits:

Equipment: Sellers Nozzle Model Number: 360-2 Maximum Throw Distance - 20 feet

The cleaning effectiveness of the Sellers nozzle is dependent on the pressure (psi) of the supplied cleaning agent, flow rate (gpm) of the supplied cleaning agent, the diameter of the nozzle orifice, the distance from the nozzle to the surface being cleaned, and the length of time (cycles) the nozzle is operated. The Sellers nozzle was demonstrated with the following parameters:

Diameter of nozzle aperture: 5/16 inch (7.9 mm)
Discharge flow rate: 35 gpm
Pump operating pressure: 80 psi
Distance from nozzle to surface: 20 feet
Time per revolution: 20 minutes (time required for complete coverage of the total interior surface of a tank by the cleaning agent exiting the Sellers nozzle)
Minimum number of cycles: 12

In the VGMDU process, air receiver tanks shall be spray rinsed under pressure with a 2% CimClean TM solution or a 2% LP 969 TM solution. This spray rinsing under pressure dislodges rust, scale and solids. Vector shall spray clean the interior surfaces of receiver tanks with a cleaning agent for a minimum of 12 complete cycles.

At the starting point of the cleaning process for each air receiver tank, the cleaning agent shall contain no more than 50 ppm PCBs and no contamination above 2 ppm PCBs shall have come from sources other than cleaning metallic pipe and/or air compressor systems.

b. Metallic Pipe

Metallic pipe may be cleaned according to the performance-based procedure operating conditions demonstrated in the May 5 - 8, 1992 and in the July 26 - 30, 1993 PCB Disposal Demonstration.

The VGMDU process operated as below is approved to clean metallic pipe up to and including eight inches in

diameter. The performance of the VGMDU operated as below has cleaned surfaces to less than 100 micrograms per 100 square centimeters (1 ug/cm^2) but not less than 10 micrograms per 100 square centimeters (0.1 ug/cm^2).

Metallic pipe eight-inches in diameter or less is decontaminated by flushing the pipe with cleaning agent using the pumping equipment described in the Demonstration Test Report dated June 5, 1992. The cleaning agent used may be either a 2% solution of Cimclean 30 TM or a 2% solution of LP 969 TM. This is pumped through the piping system with a centrifugal pump rated at approximately 300 gpm driven by a 25 horsepower, 240 volt, three phase electric motor. Cleaning agents are filtered through a sock type Findlow filter system and recirculated through the system. Net flushing time is for a minimum of four hours to achieve a PCB surface concentration level of between 10 and 100 ug/100 cm².

The VGMDU process operated as below is approved to clean metallic pipe up to and including 36 inches in diameter. The performance of the VGMDU operated as below has cleaned surfaces to less than 100 micrograms per 100 square centimeters (1 ug/cm^2) but not less than 10 micrograms per 100 square centimeters (0.1 ug/cm^2).

Metallic pipe 36 inches in diameter or less is decontaminated by spraying the pipe with a cleaning agent using the spraying equipment described in the Demonstration Test Report dated September 22, 1993. The cleaning agent used is a 2% solution of Cimclean 30. This is sprayed on the interior pipe surface by pumping the cleaning agent through a specially designed nozzle at a rate of approximately 28 gpm at a pressure of 1,800 to 2,000 psi. The cleaning agent is filtered through a sock type filter and recirculated through the system. Net flushing time is 30 square feet of interior pipe surface per minute to achieve a PCB surface concentration level of between 10 and 100 ug/100 cm² (See Table 1). Table 1 describes the operating parameters for various diameters of pipe.

c. Appurtenances and Equipment

(1) The process for cleaning appurtenances (valves, controllers, fittings, other pipeline equipment associated with metallic pipe, compressed air systems and disassembled air compressors) contaminated by PCBs may be undertaken according to the performance-based procedure operating conditions demonstrated in the May 5 - 8, 1992 PCB Disposal Demonstration. In this process, the items to be cleaned are

disassembled as necessary to expose all surfaces for cleaning, and placed in a decontamination chamber as described in the permit application which is on file at EPA Headquarters. The items are placed in such a way that their internal and external surface areas are exposed to a high velocity spray through several spray nozzles. The VGMDU process operated as below is approved to clean appurtenances. The performance of the VGMDU operated as below has cleaned parts and fittings to less than 10 micrograms per 100 square centimeters (0.1 ug/cm²). Therefore, the appurtenances cleaned according to the performance requirements below are unregulated for (a) further distribution in commerce, except in natural gas pipelines, and unregulated for disposal as set forth in Condition 4.

Approved operations for parts and fittings, which have been demonstrated to achieve surfaces cleaned to less than $0.1~\rm ug/cm^2$, shall include the following equipment operating at the following limits:

Equipment: Better Engineering Parts Washer

Model No.: 200 HD Flow Rate: 50 gpm Temperature: 190° F Operating Time: 1 hour

Cleaning Agent: 5% sodium hydroxide

solution.

The process for cleaning appurtenances (valves, controllers, fittings, other pipeline equipment associated with metallic pipe, compressed air systems, and other parts) contaminated by PCBs may be undertaken according to the performance-based procedure operating conditions demonstrated in the July 26 -30, 1993 PCB Disposal Demonstration. In this process, the items to be cleaned are disassembled as necessary to expose all surfaces for cleaning, and placed in a decontamination chamber as described in the Demonstration Test Report dated September 22, 1993. The items are placed in the decontamination chamber and completely immersed in the cleaning agent. cleaning agent is agitated by means of a submersible pump and heated with an external heat source. The VGMDU process operated as below is approved to clean appurtenances The performance of the VGMDU operated as below has cleaned parts and fittings to less than 100 micrograms per 100 square centimeters (1 ug/cm²), but not less than 10 micrograms per 100 square centimeters (0.1 ug/cm²).

Approved operations for parts and fittings which have been demonstrated to achieve surfaces cleaned to less than

1.0 ug/cm² but not less than 0.1 ug/cm² shall consist of soaking the parts and fittings in an agitated, heated, 2% solution of Cimclean 30 for a period of 4 hours.

6. <u>Measurement-Based Cleaning of Metallic Pipe, Compressed</u> <u>Air Systems and Air Receiver Tanks</u>

Vector is only authorized to clean piping 8 inches or less associated with air compressors, appurtenances and air receivers (maximum diameter of 40 feet) regardless of the length of the tank and metallic piping up to 36 inches associated with air compressors, line pipe and other industrial uses.

The surface measurements shall be taken by wipe or swab sampling and the sampling wipes/swabs chemically analyzed according to the procedures submitted in the permit application dated February 8, 1992 and the demonstration test plan dated April 6, 1992. Air compressors, appurtenances and pipe cleaned are regulated for use/disposal based on the surface area requirements in Condition 4. Recleaned areas must be surface sampled at locations different from earlier sample sites.

a. Appurtenances

Appurtenances, that is, miscellaneous valves, controllers, parts, fittings, other equipment associated with compressed air systems, metallic piping and disassembled air compressors contaminated by PCBs, may be cleaned either by spraying in a decontamination chamber as described in Condition 5. C. 1 or by soaking in a heated, agitated solution of Cimclean 30 as described in Condition 5. C. 2. The process for cleaning appurtenances by either method requires verification by a wipe sampling process. For the spraying process, the items to be cleaned are disassembled as necessary to expose all surfaces for cleaning, and placed in a decontamination chamber as described in the permit application which is on file at EPA Headquarters. The items are placed in such a way that their internal and external surface areas are exposed to a high-velocity spray through several spray nozzles.

Following placement of the items to be cleaned, the chamber is then sealed to prevent volatile organic emissions. Any vapors are vented through a carbon absorption canister. For a period of at least one hour (60 minutes), a continuous high velocity recirculating flush shall be established by an external pump having the same capacity and flow rate as that documented in

the permit application and demonstrated from May 5 - 8, 1992.

At the end of the high velocity spray/soak cycle the chamber shall be opened and the parts removed, and a 100 cm² wipe samples will be taken on 10% of the parts cleaned, or a minimum of two samples which ever is greater.

For appurtenances cleaned by the soaking method, the items are immersed in a heated, agitated solution of 2% Cimclean 30. Following placement of the items to be cleaned, the chamber is then sealed to prevent volatile organic emissions. Any vapors are vented through a carbon absorption canister. Items to be cleaned remain in the heated, agitated solution for a minimum of 4 hours. At the end of the soak cycle, the chamber shall be opened and the parts removed and a 100 cm² wipe sample will be taken on a representative number of parts (see above).

The PCB surface concentrations shall be determined by chemical analysis of the wipes by Gas Chromatography (GC). The analytical procedures used are described in Vector applications on file at EPA Headquarters.

In the event Vector does not achieve PCB levels below 1 ug/cm², Vector may repeat the process using any or all of the cleaning agent until the PCB concentration is below .1 ug/cm² when recleaned surface levels are remeasured as above. This is applicable to parts a, b and c of this Condition.

b. Metallic Piping

For measurement-based cleaning of metallic pipe up to 8 inches by flushing, a minimum process time equal to the times given in the performance based cleaning in Condition 4.b. will be used.

The surface concentration shall be measured according to appropriate wipe (for 4-inch interior diameter or larger pipe) or swab (for less than 4-inch interior diameter pipe) sampling procedures.

A surface sampling to verify measurement-based procedures used to clean pipe, if there is less than 100 square feet or 9.0 square meters of pipe surface to be cleaned, only one sample is required. For pipe systems of over 9.0 square meters, one sample is

required for each 9.0 square meters and one for any remaining surface area left beyond 9.0 square meters area or multiples of 9.0 square meters. A sample shall be taken for every 9.0 square meter of inside diameter pipe surface.

For measurement-based cleaning of pipe up to 36 inches by the spraying process, a minimum cleaning time equal to the times given in the performance-based cleaning in Condition 5.b will be used. The surface concentration shall be measured according to an appropriate wipe sample on a 100 cm² area.

If pipes to be cleaned are cut into convenient lengths and are not buried, one sample for each length of pipe will be taken. If the pipe is not cut into convenient lengths and/or is buried, one sample will be taken for every 100 linear feet of pipe, regardless of the diameter of the pipe.

c. Air Receiver Tanks

For measurement-based cleaning of air receiver tanks a minimum process time equal to the times specified in the performance based cleaning in Condition 4.a. will be used.

The surface concentration shall be measured according to approved sampling procedures. For surface sampling to verify measurement-based procedures to clean air receiver tanks, wipe samples will be taken from the interior surface of the air receiver tanks at the maximum throw distance. A spiked coupon shall be placed at the maximum throw distance and at the end of the test, the coupon shall be wipe sampled.

7. Feedstock Quality and Restrictions

Prior to decontamination, samples of cleaning agent from all parts of the VGMDU process shall be collected and analyzed using gas chromatography procedures specified in EPA-approved procedures outlined in the following documents:

"Guidelines for PCB Destruction Permit Applications and Demonstration Test Plans for PCB Disposal by Non-Thermal Alternative Methods," August 21, 1986;

"Recommended Analytical Requirements for PCB Data Generated On-Site During Non-Thermal PCB Destruction Tests," US EPA, March 19, 1986 (Draft);

"Quality Assurance and Quality Control Procedures for

Demonstrating PCB Destruction in Filing for PCB Disposal Permit," US EPA, June 28, 1983 (Draft); and

"Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans," QAMS-005/80, Office of Research and Development, US EPA, December 29, 1980.

For air receiver tanks the performance-based process demonstrated from May 5 - 8, 1992 used cleaning agent containing less than 50 ppm at the beginning of each pass. Therefore, when cleaning air receiver tanks, if the PCB concentration in process leaning agent is 50 ppm or greater, then that process fluid shall not be further used for the performance-based cleaning of air receivers, but may be filtered through the activated carbon filtration system and re-used.

Used cleaning agent containing 50 ppm or greater PCBs, and/or water containing 3 ppb or greater PCBs, may be authorized through this approval for reuse only in cleaning other contaminated air compressors, metallic pipe, disassembled air compressor, appurtenances, and the VGMDU. These liquids at these concentrations may be transported from one site to another so long as: they are transported and stored in USDOT-approved containers; the containers are labeled with the M_L mark according to 40 CFR 761.40; the equipment treated with the liquids at the different sites is regulated for disposal and belongs to the same owner; the liquids are not diluted with other liquids containing less than 50 ppm spent cleaning agent solution, and/or less than 3 ppb water; and the liquids which are no longer useful for cleaning or which have exceeded approved PCB concentrations for reuse shall be disposed of according to Condition 8.

Should Vector successfully demonstrate to EPA that the VGMDU process is capable of treating higher concentrations of PCBs in an air receiver/compressor systems or use different operating conditions for cleaning air receiver/compressor systems, this condition may be modified accordingly. Authorized EPA representatives may at their discretion choose to witness the demonstration and obtain split samples for verification of analytical results.

8. <u>Disposal of VGMDU Aqueous Liquids (Process Water and Spent</u> <u>Cleaning Agent</u>

All VGMDU aqueous liquids that have been in contact with any PCB articles such as disassembled air compressors, air receiver tanks, piping, valves, appurtenances and organic liquids containing 3 ppb and greater PCBs shall be filtered through an activated carbon filter until the treated process water is less than 3 ppb. These process waste cleaning agents shall have a pH range of 6-9. This treated process water at less than 3 ppb PCBs may then be sent to a Public Owned Treatment Works (POTW) or an industrial waste water treatment facility which has a National Permit Discharge Elimination System (NPDES) permit with a numeric

limit to accept the level of PCBs in the aqueous liquids and discharge water containing less than 3 ppb of PCBs. If the process water is sent to a facility with a NPDES permit, Vector shall keep copies of manifests, the amount of water processed, the concentration of PCBs in the water to be processed, and the NPDES permit received by the POTW. Vector may also send the treated process water at less than 3 ppb to a RCRA approved disposal facility

9. VGMDU Decommissioning/Malfunction

If the surface sampling, as described in Condition 6, reveals that PCBs in the metallic piping or compressed air system have not been adequately removed after VGMDU repeated processing, the affected VGMDU shall cease operation and Vector must dispose of the metallic piping/compressed air system components in question as if it/they contained PCBs at the level of the original fluid. Vector must notify the EPA Regional PCB Disposal Coordinator in the applicable EPA Region prior to moving the VGMDU off site. Vector shall determine if the unsuccessful processing is due to contaminants in the fluid or VGMDU process failure. If the VGMDU successfully processes all the fluid from the next three consecutive passes, the cause of the unsuccessful processing shall be assumed to be contaminants in the fluid and not VGMDU process failure. If the VGMDU process cannot successfully decontaminate the PCB appurtenance, piping and air receiver tanks, the affected VGMDU must cease operation and Vector must notify the Chief, PCB Disposal Section at (202) 260-3964, as well as the Regional Coordinator during the next business day, and file with each of them a written report within 7 days. Repeated VGMDU process failures are signs of process malfunction and must be reported so that EPA is able to maintain accounting of working commercial VGMDUs. The affected VGMDU shall not resume operation until the problem has been corrected to the satisfaction of the Chief, PCB Disposal Section. A VGMDU which has been decommissioned must also be reported immediately to the Chief, PCB Disposal Section at EPA Headquarters and also to the Regional PCB Coordinator for the EPA Region in which such VGMDU is decommissioned.

10. VGMDU Process Waste Restrictions

All wastes generated by the VGMDU process (i.e., filter media, sludges, water or other effluents, rags, spill containment plastic sheeting, etc.) shall be treated or disposed of as if the waste stream contained the PCB concentration of the original source or wipe, valves, fittings and appurtenances as required by the "dilution rule" at 40 CFR 761.1 (b).

The carbon entrapment canister on the parts decontamination chamber must be replaced every six (6) months or immediately after 1400 hours of VGMDU operation, whichever is earliest.

11. VGMDU_Process Monitoring/Recordkeeping

Provisions must be made to assure that the following information is suitably monitored and recorded for PCBs processed, such that materials harmful to health or the environment are not inadvertently released:

- a. name, address, and telephone number of the VGMDU operator and supervisor;
- b. the name and business address of the person or firm whose PCB-containing air compressor system, metallic pipe, appurtenances, and/or PCB containing waste water are being processed;
- c. a description of the compressed air system, metallic piping, and/or appurtenances including the estimated dimensions of all air receiver tanks and the estimated dimensions of the compressed air system exclusive of the receivers, including the diameter and length of all the pipe in the system;
- d. the dates the VGMDU is on the site;
- e. the estimated quantity and PCB concentration of cleaning agent charged into the air compressor system, metallic piping, and/or appurtenances;
- f. the estimated quantity and PCB concentration of spent cleaning agent, waste water, and other treated materials produced during VGMDU processing/cleaning of each compressed air system or metallic pipe system;
- g. the date, time and duration of treatment for each compressed air system;
- h. a copy of the gas chromatogram to determine the final concentration of the treated cleaning agent or waste water not sent for disposal;
- i. records of the estimated quantity and PCB concentration of wastes produced, the method of disposal and location of the disposal facility for each waste;
- j. certificate of destruction from the TSCA-permitted facility and the equivalent acknowledgement of receipt/discharge from the facility with NPDES permit for all PCB wastes disposed.

Disposal recordkeeping documents must be compiled within 60 days of the testing date, must be kept at one centralized location, and must be made available for inspection by authorized

representatives of the EPA. Such documents shall be maintained for at least five years starting from the Vector's commercial job. Vector must also maintain the records required by 40 CFR 761.180(f). If Vector or its authorized agents terminate business, these records or their copies must be submitted to the Director of Chemical Management Division.

In addition, Vector must maintain, aboard the VGMDU, a record of the PCB disposal services performed by the VGMDU during the previous month. These records must be available for inspection by authorized representatives of EPA.

12. PCB Releases

In the event Vector or an authorized field supervisor of the VGMDU believes, or has reason to believe, that a release of PCBs has occurred from the VGMDU during processing, Vector must inform the appropriate EPA Region by telephone within 2 business hours from the time of discovery. Any spills of PCBs or other regulated fluids shall be promptly controlled and cleaned up as provided in the Vector Spill Prevention Control and Countermeasure Plan, and in accordance with the TSCA PCB Spill Cleanup Policy (52 FR 10688, April 2, 1987). Cleanup shall begin immediately and must comply with the TSCA PCB Spill Cleanup Policy (52 FR 10688, April 2, 1987).

A written report describing the incident must be submitted to the appropriate EPA Regional Contact, the Regional Administrator, and the Director, Chemical Management Division of OPPT by the close of business on the regular business day following the incident. In addition, a written report describing the spill, operations involved, cleanup actions and changes in operation to prevent such spills in the future must be submitted to the appropriate EPA Regional Contact, Regional Administrator, and Director, CMD of OPPT within 5 business days.

PCB spills must be reported in accordance with the spill reporting requirements prescribed under Section 311 of the Clean Water Act for discharges to navigable waters and under the Comprehensive Environmental Response, Compensation, and Liability Act (Superfund) for discharges to other media.

13. Safety and Health

Vector shall comply with all applicable safety and health standards, as required by Federal, State and local regulations and ordinances. Any lost time injury must be reported to the appropriate EPA Regional Contact, Regional Administrator, and Director, CMD of OPPT by the end of the next business day.

14. Facility Security

The VGMDU shall be secured (such as a fence, alarm system, or barricades, as appropriate) at each site to restrict or control public access to the area.

15. Reporting

Any reports required by Conditions (6), (8), (10), and (11) are to be submitted by telephone to the appropriate regional PCB Disposal Site Coordinator within the time frame specified. In addition, Vector shall file written reports with the Regional Administrator of the appropriate EPA region, and the Director of the Chemical Management Division within the time frame specified in the aforementioned conditions.

16. Personnel Training

Vector shall be responsible for ensuring that the supervisory personnel directly involved with the handling or disposal of PCB contaminated fluid using the VGMDU process are demonstrably familiar with the general requirements of this approval. At a minimum, this must include:

- a. the types of systems and associated equipment which may be treated using the VGMDU;
- b. basic recordkeeping requirements under this approval and the location of records;
- c. notification requirements;
- d. waste disposal requirements for VGMDU process and byproduct wastes generated during the operation of the VGMDU process; and
- e. reporting requirements.

In this regard, Vector must maintain on-site during the operations of its VGMDU a copy of this approval; the spill prevention and cleanup plan; and sampling and analytical procedures used to determine PCB concentrations.

17. Equipment Transport

PCB-contaminated equipment (i.e., pumps, tanks, etc.) and liquids on the VGMDU shall be transported off-site in accordance with 40 CFR Section 761.40 and the U.S. Department of Transportation (USDOT) requirements of Title 49 Part 172. Such requirements include placarding the mobile facility and labeling all PCBs. Vector must comply with vehicle placarding requirements unless VGMDU process equipment (i.e., pumps, feed hoses, pipes etc.) on the VGMDU are decontaminated in accordance with the procedures described in Vector's permit application and test plan, prior to transportation off-site.

18. Financial Assurance

Vector shall incorporate financial assurance of closure and liability coverage provisions into its closure plan. These provisions must be equivalent to those specified in 40 CFR Part 264, issued under Subpart H of the Resource Conservation and Recovery Act (RCRA), and provide funds for:

- a. proper closure of the VGMDU and support operations; and
- b. compensating others for bodily injury and property damage caused by accidents arising from operations of the VGMDU.

Vector has filed with the Director, Chemical Management Division, a closure plan, closure cost estimates, and financial assurance mechanism. EPA has not completed its review of these documents. Following EPA review, should Vector receive a Notice of Deficiency for any or all of these documents, Vector shall have thirty days to satisfactorily address all deficiencies or this approval is automatically suspended on the thirty first day. Within thirty days of receipt by Vector of a Notice of Acceptance for the closure plan, closure cost estimates, and financial assurance mechanism, Vector shall have its financial assurance mechanism in place in full force and effect or the approval is automatically suspended on the thirty first day. Vector may request an extension from OPPT for either of these deadlines. EPA considers financial assurance a critical condition in this in this approval.

Vector must submit annual updates to the Director, Chemical Management Division of the financial assurance of closure and liability coverage provision described herein.

19. Additional VGMDU

Vector must file a written pre-operation report with the Director of the Chemical Management Division within thirty (30) days from the date of manufacture of each additional VGMDU which is to be operated in the United States. This report shall contain the following information:

- a. date of manufacture of the VGMDU;
- b. identification and/or serial number of the new VGMDU;
- c. certification by an independent, registered professional engineer to the effect that the VGMDU is substantially identical to the original VGMDU in terms of engineering

design, hardware, VGMDU process capacity, quality and workmanship;

- d. certification by the chief executive officer of Vector signifying that the VGMDU construction has been completed in such manner; and
- e. a list of all substantive and non-substantive changes made to the design and construction of any new VGMDU which is not identical to the original VGMDU.

20. VGMDU Process/Equipment Modifications

No major modifications may be made to the VGMDU design, as described in the application and demonstration plan for this approval, without written approval of the Director of the Chemical Management Division.

21. Ownership Transfer

Vector must notify EPA at least 30 days before transferring ownership of the VGMDU process. Vector must also submit to EPA, at least 30 days before such transfer, a notarized affidavit signed by the transferee which states that the transferee will abide by Vector's EPA approval. Within 30 days of receiving such notification and affidavit, EPA will issue an amended approval substituting the transferee's name for Vector's name, or may require the transferee to apply for a new PCB disposal approval. In the latter case, the transferee must abide by Vector's approval until EPA issues the new approval to the transferee. Should Vector fail to provide EPA with the required written documentation of the transfer or to provide this documentation within the specified time frame, this approval shall be null and In any instance, Vector must maintain its financial assurance mechanism in full force and effect until release, in writing by the Director, Chemical Management Division.

22. Approval Severability

The conditions of this approval are severable, and if any provision of this approval or any application of any provision is held invalid, the remainder of this approval shall not be affected thereby.

23. Approval Expiration Date

This approval shall expire on January 30, 1998. For an approval renewal, EPA may require additional information and/or testing of the VGMDU process. To continue the effectiveness of this approval pending EPA action on reissuance, Vector must submit a renewal request in writing to EPA at least 90 days, but not more than 180 days, prior to the expiration date of this

approval.

24. Compliance with Federal Regulations

Vector shall comply with all applicable requirements of the Federal PCB Regulation, 40 CFR Part 761, in operation of the VGMDU. Particular note shall be given to:

- a. 40 CFR, section 761.65 storage for disposal;
- b. 40 CFR, section 761.79 decontamination; and
- c. 40 CFR, section 761.180 records and monitoring.
- d. 40 CFR, section 761, Subpart J, PCB waste disposal records and reports.

25. Previous Approvals

This approval shall supersede all previous U.S. EPA Headquarters and/or U.S. EPA Regional PCB disposal approvals or amendments for the VGMDU process.

APPROVAL

1. Approval to dispose of PCBs is hereby granted to Vector Group, Inc. (Vector) of Cincinnati, Ohio, subject to the conditions expressed herein, and consistent with the materials and data included in the approval application filed by the company. EPA reserves the right to impose additional conditions or otherwise modify this approval when it has reason to believe that the continued operation of the Vector Group Mobile PCB Decontamination Unit (VGMDU) presents an unreasonable risk to public health or the environment or if from time to time EPA modifies the rules and regulations governing this approval. Any such proposed additional conditions shall be preceded by reasonable advance notice to Vector and opportunity for Vector to comment on the proposed modifications.

Any departure from the conditions of this approval or the terms expressed in the application must receive prior written authorization of the Director, Chemical Management Division of the Office of Pollution Prevention and Toxics. In this context, "application" shall be defined as all data and materials which have been received by EPA from Vector regarding the VGMDU process.

- 2. This approval to dispose of PCBs does not relieve Vector of the responsibility to comply with all applicable Federal, State and local regulations. Violations of any applicable regulations may be subject to enforcement action, and may result in termination of this approval. This approval may be rescinded at any time for failure to comply with the terms and conditions herein, failure to disclose all relevant facts, or for any other reasons which the Director, Chemical Management Division deems necessary to protect public health and the environment.
- 3. Vector shall be responsible for the actions of any authorized VGMDU process employees when those actions are within the scope of operating or moving the equipment related to performance of the VGMDU process, and Vector shall assume full responsibility for compliance with all applicable Federal, State and local regulations including, but not limited to, any advance or emergency notification and accident reporting requirements.
- 4. EPA reserves the right for its employees or agents to inspect Vector PCB disposal activities at any location or reasonable time.

3/18/94 Date

John W. Melone, Director Chemical Management Division

APPENDIX I

TO THE VECTOR APPROVAL TO DISPOSE OF POLYCHLORINATED BIPHENYLS

BACKGROUND

Section 6(e)(1)(A) of the Toxic Substances Control Act (TSCA) requires that EPA promulgate rules for the disposal of polychlorinated biphenyls (PCBs). The rules implementing section 6(e)(1)(A) were published in the Federal Register on May 31, 1979 (44 FR 31514) and recodified in the Federal Register of May 6, 1982 (47 FR 19527). Those rules require, among other things, that various types of PCBs and PCB Articles be disposed of in EPA-approved landfills (40 CFR 761.75), incinerators (40 CFR 761.70), high efficiency boilers (40 CFR 761.60), or by alternative methods (40 CFR 761.60(e)) that demonstrate a level of performance equivalent to EPA-approved incinerators or high efficiency boilers. The May 31, 1979 Federal Register also designated Regional Administrators as the approval authority for PCB disposal facilities.

On March 30, 1983, EPA issued a procedural rule amendment to the PCB rule (49 CFR 13181). The procedural rule change transferred the review and approval authority of mobile and other PCB disposal facilities that are used in more than one region to the Office of Pesticides and Toxic Substances (OPTS). The purpose of the amendment was to eliminate duplication of effort in the regional offices and to unify the Agency's approach to PCB disposal. The amendment gives the Assistant Administrator authority to issue nationwide approvals (i.e., approval which will be effective in all ten EPA regions) to mobile and other PCB disposal facilities that are used in more than one region.

EPA received an application dated February 8, 1991 from Vector for a permit to clean PCB-contaminated compressed air systems (including piping, air receiver tanks, parts and appurtenances) at industrial facilities. Vector's Demonstration Plan was submitted to EPA on April 6, 1992. From May 5 - 8, 1992 Vector demonstrated the VGMDU process on equipment and metallic pipe up to 12-inches in diameter at a facility in Sterling, Virginia. A second demonstration was held from July 26 - 30, 1993 in Cincinnati, Ohio to expand the scope of the existing permit.

The findings presented in APPENDIX II below are for the Vector PCB disposal demonstrations conducted during May 1992 and July, 1993. Complete, acceptable demonstration test reports dated June 5, 1992 and September 22, 1993 are in EPA's files.

APPENDIX II

TO THE VECTOR APPROVAL TO DISPOSE OF POLYCHLORINATED BIPHENYLS

FINDINGS

- 1. Vector Group, Inc. (Vector), of Cincinnati, Ohio has demonstrated a solvent extraction process, the Vector Group Mobile PCB Decontamination Unit (VGMDU) whereby PCB articles, mainly contaminated metallic pipe, compressed air systems, and air receiver tanks are decontaminated to levels between 10 and below 100 micrograms per 100 square centimeters (ug/100 cm²) for receivers and metallic pipe and less than 10 ug/100 cm² for parts and appurtenances.
- 2. The Vector decontamination process for metallic piping eight-inches in diameter and less includes the extraction and removal of PCBs by flushing with an extraction cleaning agent. The process for metallic piping 36 inches in diameter or less includes the extraction and removal of PCBs by spraying with an extraction cleaning agent.

The VGMDU procedure for cleaning air receivers, bottles or tanks consists of spraying the interior surface with a cleaning agent through a Sellers 360 high-pressure nozzle.

The VGMDU process for cleaning parts consists of spraying the parts in a rotating tray in a commercial parts washer.

- 3. The VGMDU process includes a water treatment system whereby all spent cleaning agent is pumped through a series of activated carbon canisters. Treated spent cleaning agent is analyzed for PCB content and is either re-used or, if it contains a PCB concentration of less than 3 ppb, is disposed of in an appropriate POTW or other facility having a appropriate NPDES permit.
- 4. Only operation of the VGMDU process by Vector personnel has been demonstrated to the EPA. Therefore, this permit only applies to VGMDUs operated by Vector personnel. Vectormanufactured VGMDUs under lease to other companies or persons are not approved for operation under this permit.
- 5. The VGMDU is a completely enclosed mobile process that is designed to prevent any release of PCBs to air, water, or to surfaces. The VGMDU was developed by Vector. From the results of the demonstrations conducted from May 5 8, 1992 and from July 26 30, 1993, the decontamination process is effective in removing PCBs from:

- a. air receivers, metallic piping 36 inches in diameter and less, and air compressors, and appurtenances to below 100 micrograms/100 square centimeter.
- b. air compressor parts to below 10 micrograms/100 square centimeters.

Further details of the methods and equipment used in the cleaning of disassembled air compressors, metallic pipe, air receivers, valves, controller and fittings from a compressed air system are included in the VGMDU process demonstration test plan on file at EPA Headquarters.

- 6. The VGMDU is designed with shut-off valves at key locations and other safety features which will act to prevent spills into the environment. The VGMDU is housed on a flatbed trailer and shall be operated in a restricted area. The VGMDUs are placed on a containment pad with a berm.
- 7. The VGMDU is a closed system and does not emit harmful materials into the air, water, soils, or other surfaces. The permit application and process demonstration test plan state that both the operators of the VGMDU and persons conducting sampling of the VGMDU use specified safety procedures and have proper protective clothing to minimize worker exposure.

Any waste streams from the process will be packaged in Department of Transportation (DOT) approved packaging containers. The containers will include appropriate liquid transport in bulk and/or drums of 55 gallon or 30 gallon size and/or 1 to 5 gallon carboys placed in an overpack 55 or 30 gallon drum with absorbent materials sufficient to absorb twice the volume of the liquids present, as appropriate. Absorbent wastes shall be packaged and handled according to the requirements for PCB containing solids. The liquid and solid wastes will be disposed of by incineration unless compliance with landfill disposal regulations can be demonstrated or, for the aqueous portions having PCB levels below 3 ppb, sent for discharge to a POTW or other facility having an appropriate NPDES permit.

8. The VGMDU process has shown to have a level of performance equivalent to that of thermal destruction methods (incinerators and high efficiency boilers). Under EPA regulations (40 CFR 761.60(e)), many factors are used to determine the appropriate destruction equivalency goals for alternate PCB destruction methods. Submissions from Vector during the previous permit application process have indicated that the decontamination methods meet the standards set by an EPA-approved incinerator or high efficiency boiler in the efficiency of disposal. Furthermore, the VGMDU is designed to protect workers from PCB exposure and precludes any apparent release of PCBs to the environment.

- 9. Therefore, EPA finds that a demonstration of the Vector PCB disposal method is equivalent to a demonstration of a 40 CFR Part 761.70 incinerator or 40 CFR Part 761.60 high efficiency boiler and that the demonstration of the VGMDU does not pose an unreasonable risk of injury to human health or the environment.
- 10. EPA does not take the responsibility for any damage that the Vector cleaning agents might cause to any item or equipment as a result of using the VGMDU process.

APPENDIX III A

SAMPLE VGMDU PROCESS 30-DAY ADVANCE NOTIFICATION FORM

Client Name: Client Address: Vector Contact:

Phone:

Contact: Phone:

Type of PCB Disposal Activity:

Amount and Type of PCB Material:

PCB Concentration Range:

Scheduled Time(s) and Date(s):

Contacts and Phone:

EPA - Wash., D.C. Chief, OB (TS-798) 401 M Street S.W. Washington, DC 20460 202-260-3933

State Agency

EPA Region

<u>Local</u>

Site Locations:

APPENDIX III B

TO	THE	VECTOR	APPROVAL	TO	DISPOSE	OF	POLYCHLORINATED	BIPHENYLS
* * * *	***	*****	*****	***	*****	***	*****	*****

SAMPLE VGMDU PROCESS TWO WEEK ACTIVITY SCHEDULE FORM

Period Covered:

Pr	Most obable Schedul erating Date(s) te Time(s)) & No. of	County(s) of Operation or Central Location & Contact Phone No.
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Week No. 1:

Week No.2:

APPENDIX III C

SAMPLE THIRTY DAY NOTIFICATION FORM FOR CONDITION NO. 1

Company Name, Address, Phone Number, and Contact Person:

Person, Organizational Affiliation/Title, and Phone Number for:

EPA Regional Contact:

State Contact:

Local (Town/City/County) Contact:

Nature of the Disposal Activity:

Kind of PCB Disposal Process:

Kinds of Material Containing PCBs:

Numbers and Sizes of Pieces of Equipment Containing PCBs:

Quantity of Solids and/or Volume of Liquid(s) Containing PCBs:

Concentration(s) of PCBs in the Material Treated:

Location

Street Address or Other Identifier for All Sites: Telephone Contact and Address for Site Manager:

Time of Processing

Date(s):

Time(s):

APPENDIX III D

NOTICE OF INTENT TO OPERATE AND PUBLIC MEETING

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region III
6TH and Walnut Streets
Philadelphia, Pennsylvania

Date of this notice: Public Notice No.

The Vector Group, Inc., which is located at 1118 Ferris Road, Cincinnati, OH 45102 proposes to commence permanent operations for the storage and destruction of PCBs wastes. A TSCA permit was granted to Vector Group, Inc. on _____ under the authority of the Toxic Substances Control Act.

Persons wishing to comment on the intent to commence permanent operation must submit in writing. Written comments must be sent to United States Environmental Protection Agency, 6th and Walnut Streets, Philadelphia, PA 19106, Attention: Joe Green (3TS9) and must be received by EPA on or before

If the written comments warrant a public meeting, then it will be held by EPA to receive such comments on ______ in the

at p.m.

All comments should address the appropriateness of the decision to grant permanent operations to Vector. All comments must raise ascertainable issues and should be accompanied by all reasonably available arguments, factual grounds and supporting material. It is EPA's intent to limit comments at the meeting to a maximum of five minutes per speaker so persons wishing to participate in the hearing are encouraged to prepare written material to be submitted along with any oral comments.

All written comments received by the above date and all comments received at the meeting will be considered in the formulation of final determination regarding permanent operations. After considering all comments and the requirements and policies in TSCA and its implementing regulations, the EPA Regional Administrator will make a decision regarding permanent operations.

The administrative record, including the application, all data submitted by the applicant, the fact sheet, the approval, maps showing the exact facility locations and comments received and

copied at EPA Region III, 6th & Walnut Streets, Philadelphia, PA 19106, between the hours of 8:30 a.m. and 4:30 p.m. Monday through Friday. A copying machine will be provided for public use at a charge per page. Any person desiring further information, copies of portion of the administrative record, or an appointment to review the record should contact Joe Green at the above address or call (215) 597-1234.

An additional copy of the application, approval and fact sheet will be available for review at the Pennsylvania Department of Environmental Resources, Solid Waste Division, 123 Main Street, Philadelphia, PA 19111.

TABLE 1
Cleaning Time for Various Pipe Diameters
for Performance-Based Cleaning

F			
Nominal Pipe Diameter (inches)	Interior Pipe Surface per Lineal Foot (Ft ²)	Lineal Feet per Minute of Cleaning Time to Achieve 30 Ft²/Minute (Ft./Minute)	Time Required to clean 40 Lineal Ft. of Pipe at a Rate of 30 Ft ² /Minute (Minutes)
4	1.05	28.6	1.4
6	1.57	19.1	2.1
8	2.09	14.3	2.8
10	2.62	11.5	3.5
12	3.14	9.5	4.2
14	3.67	8.2	4.9
16	4.19	7.2	5.6
18	4.71	6.4	6.3
20	5.24	5.7	7.0
24	6.28	4.8	.8.4
30	7.85	3.8	10.5
36	9.42	3.2	12.6

APPENDIX B

NOTIFICATIONS



January 6, 1995

City of Chicago Department of Environmental Central Office Bidg. Room 600A 320 N. Clark St. Chicago, IL 60610

Attn: Mr. Henry Henderson

Re: Thirty-Day Advance Notification of Approval for Vector Group, Inc. to Dispose of Polychlorinated Biphenyls

Gentlemen:

Vector Group, Inc. (Vector) has been retained by Clean Harbors to deregulate two shredder systems and one drum crusher at their Chicago facility. Under the terms of our nationwide permit to deregulate PCB contaminated systems issued by the United States Environmental Protection Agency, we are required to give Thirty day notification to appropriate local agencies of any such activity. Enclosed is our notification to the City of Chicago Department of Environmental.

The location of the site is:

Clean Harbors of Chicago, Inc 11800 South Stony Island Ave Chicago, IL 60617

We understand that Clean Harbors would like to begin this activity on or about January 16 1995. If the proper agencies approve of this start date, we would be agreable to commencing the deregulation at that time. We have also notified the USEPA office in Washington, DC, the EPA Region V office and all appropriate State and local agencies.

If you have any questions, or need further information, please let me know.

Regards

Martin Heckard
Project Manager

Math



January 6, 1995

Illinois EPA
Div. of Land Polluition Control #24
Permit Section
2200 Churchill Rd.
PO. Box 19276
Springfield,IL 62794-9276
(217)524-3265

Attn: Mr. Robert Watson, P.E.

Re: Thirty-Day Advance Notification of Approval for Vector Group, Inc. to Dispose

of Polychlorinated Biphenyls

Gentlemen:

Vector Group, Inc. (Vector) has been retained by Clean Harbors to deregulate two shredder systems and one drum crusher at their Chicago facility. Under the terms of our nationwide permit to deregulate PCB contaminated systems issued by the United States Environmental Protection Agency, we are required to give Thirty day notification to appropriate local agencies of any such activity. Enclosed is our notification to the City of Chicago Department of Environmental.

The location of the site is:

Clean Harbors of Chicago, Inc 11800 South Stony Island Ave Chicago, IL 60617

We understand that Clean Harbors would like to begin this activity on or about January 16 1995. If the proper agencies approve of this start date, we would be agreable to commencing the deregulation at that time. We have also notified the USEPA office in Washington, DC, the EPA Region V office and all appropriate State and local agencies.

If you have any questions, or need further information, please let me know.

Regards

Martin Heckard

Martin Heckard

Project Manager

Enclosure: Cliff Gould



January 6, 1995

USEPA 401 M Street S.W. (7404) Washington, DC 20460 (202)260-3933

Attn: Mr. Winston Lue

Re: Thirty-Day Advance Notification of Approval for Vector Group, Inc. to Dispose

of Polychlorinated Biphenyls

Gentlemen:

Vector Group, Inc. (Vector) has been retained by Clean Harbors to deregulate two shredder systems and one drum crusher at their Chicago facility. Under the terms of our nationwide permit to deregulate PCB contaminated systems issued by the United States Environmental Protection Agency, we are required to give Thirty day notification to appropriate local agencies of any such activity. Enclosed is our notification to the City of Chicago Department of Environmental.

The location of the site is:

Clean Harbors of Chicago, Inc 11800 South Stony Island Ave Chicago, IL 60617

We understand that Clean Harbors would like to begin this activity on or about January 16 1995. If the proper agencies approve of this start date, we would be agreable to commencing the deregulation at that time. We have also notified the USEPA office in Washington, DC, the EPA Region V office and all appropriate State and local agencies.

If you have any questions, or need further information, please let me know.

Regards,

Martin Heckard

January 6, 1995

USEPA Region V 77 West Jackson Boulevard Chicago, IL 60604-3507 (312)353-4342 Fax

Attn: Mr. Tony Martig

Thirty-Day Advance Notification of Approval for Vector Group, Inc. to Dispose

of Polychlorinated Biphenyls

Gentlemen:

Vector Group, Inc. (Vector) has been retained by Clean Harbors to deregulate two shredder systems and one drum crusher at their Chicago facility. Under the terms of our nationwide permit to deregulate PCB contaminated systems issued by the United States Environmental Protection Agency, we are required to give Thirty day notification to appropriate local agencies of any such activity. Enclosed is our notification to the City of Chicago Department of Environmental.

The location of the site is:

Clean Harbors of Chicago, Inc. 11800 South Stony Island Ave Chicago, IL 60617

We understand that Clean Harbors would like to begin this activity on or about January 16 1995. If the proper agencies approve of this start date, we would be agreable to commencing the deregulation at that time. We have also notified the USEPA office in Washington, DC, the EPA Region V office and all appropriate State and local agencies.

If you have any questions, or need further information, please let me know.

Regards,

Martin Heckard

Mutu

Project Manager

Thirty Day Advance Notification of Approval for **VECTOR GROUP, INC.**To Dispose of Polychlorinated Biphenyls

20 2 separation in the separat										
Client Information				Vector Information						
Name: Clean Harbors of	Name: Clean Harbors of Chicago, Inc.				oup, Inc	•				
Address: 11800 South Stony Island Ave			Address: 1118 Ferris Rd.							
City: Chicago St: IL Zip: 60617			City:	Amelia	St: OH	Zip: 45102				
Contact: James Laubsted				et: Mr. 1	M. C. Di	urfee				
Phone: (312) 646-6202	Phone: (312) 646-6202				Phone: (513) 752-8988					
Fax: (312)646-6381			USEPA PCB Activity No. OH 0000184879							
Site Loc	ation		Site Information							
Name: Same as above			Type of PCB Disposal Activity: Cleaning of equipment.							
Address: Same as above										
City: St: Zip:			Amount and Type of PCB Material: Two Shredders and one crusher.							
Contact:	Contact:				PCB Concentration Range: 0 to 10,000					
Phone:				ug/100 cm²						
Cabadulad Time(a) and Date	(a). 9,00 a	6:00	_							

Scheduled Time(s) and Date(s): 8:00 am - 6:00 pm

January 23, 1995 through February 17, 1995

Agencies Notified

USEPA	Regional EPA
Mr. Winston Lue USEPA 401 M Street S.W. (7404) Washington, DC 20460 (202) 260-3933	Mr. Tony Martig United States Environmental Protection Agency Region V 77 West Jackson Boulevard Chicago, IL 60604-3507 (312) 886-1334 or (312)353-4342
State Agency	l ocal Agency

State Agency	Local Agency		
Poiv. of Land Pollution Control #24 Permit Section 2200 Churchill Rd. POB 19276	Henry Henderson City of Chicago Department of Enviromental Central office Bldg. room 600A 320 N. Clark St. Chicago, IL 60610		



January 23, 1995

United States Environmental Protection Agency Region V 77 West Jackson Boulevard Chicago, IL 60604-3507

Attn: Ms. Priscilla Fonseca

Re: Two-week notification of approval for Vector Group, Inc. to dispose of PCBs

Gentlemen:

Vector's PCB projected disposal activity for the referenced period is shown on the following table.

Period Covered: January 23, 1994 to February 3, 1994 USEPA ID NO. OH0000184879

Week No.	EPA Region	Most Probable Operating Date	Scheduled Dates and Times	No. of Sites	Central Location & Contact Phone No.
1 January 23 - January 27					The VGMDU is demobilized and located in Cincinnati, Ohio
2 January 30 - February 3	V	February 3, 1995	January 30- February 3 8:00 am- 5:00 pm	1	Clean Harbors of Chicago, Inc. 11800 South Stony Island Ave. Chicago, IL 60617 (312) 646-6381

If you have any questions, please let me know.

Regards,

M. C. Durfee

Project Manager

M C Weerfo



January 23, 1995

United States Environmental Protection Agency 401 M Street, S.W. (7404) Washington, DC 20460

Attn: Mr. Winston Lue

Re: Two-week notification of approval for Vector Group, Inc. to dispose of PCBs

Gentlemen:

Vector's PCB projected disposal activity for the referenced period is shown on the following table.

Period Covered: January 23, 1994 to February 3, 1994 USEPA ID NO. OH0000184879

Week No.	EPA Region	Most Probable Operating Date	Scheduled Dates and Times	No. of Sites	Central Location & Contact Phone No.
1 January 23 - January 27					The VGMDU is demobilized and located in Cincinnati, Ohio
2 January 30 - February 3	V	February 3, 1995	January 30- February 3 8:00 am- 5:00 pm	1	Clean Harbors of Chicago, Inc. 11800 South Stony Island Ave. Chicago, IL 60617 (312) 646-6381

If you have any questions, please let me know.

Regards,

M. C. Durfee

M Cheerfe



February 3, 1995

United States Environmental Protection Agency Region V 77 West Jackson Boulevard Chicago, IL 60604-3507

Attn: Ms. Priscilla Fonseca

Re: Two-week notification of approval for Vector Group, Inc. to dispose of PCBs

Gentlemen:

Vector's PCB projected disposal activity for the referenced period is shown on the following table.

Period Covered: February 6, 1994 to February 17, 1994 USEPA ID NO. OH0000184879

Week No.	EPA Region	Most Probable Operating Date	Scheduled Dates and Times	No. of Sites	Central Location & Contact Phone No.
1 February 6 - February 10	V	February 9, 1995	February 8 - February 10	1	Clean Harbors of Chicago, Inc. 11800 South Stony Island Ave. Chicago, IL 60617 (312) 646-6381
2 February 13 - February 17	V	February 13, 1995	February 13- February 17 8:00 am- 5:00 pm	1	Clean Harbors of Chicago, Inc. 11800 South Stony Island Ave. Chicago, IL 60617 (312) 646-6381

If you have any questions, please let me know.

Regards,

M. C. Durfee Project Manager



February 3, 1995

United States Environmental Protection Agency 401 M Street, S.W. (7404) Washington, DC 20460

Attn: Mr. Winston Lue

Re: Two-week notification of approval for Vector Group, Inc. to dispose of PCBs

Gentlemen:

Vector's PCB projected disposal activity for the referenced period is shown on the following table.

Period Covered: February 6, 1994 to February 17, 1994 USEPA ID NO. OH0000184879

Week No.	EPA Region	Most Probable Operating Date	Scheduled Dates and Times	No. of Sites	Central Location & Contact Phone No.
1 February 6 - February 10	V	February 9, 1995	February 8 - February 10	1	Clean Harbors of Chicago, Inc. 11800 South Stony Island Ave. Chicago, IL 60617 (312) 646-6381
2 February 13 - February 17	V	February 13, 1995	February 13- February 17 8:00 am- 5:00 pm	1	Clean Harbors of Chicago, Inc. 11800 South Stony Island Ave. Chicago, IL 60617 (312) 646-6381

If you have any questions, please let me know.

Regards,

M. C. Duriee
Project Manager



February 10, 1995

United States Environmental Protection Agency 401 M Street, S.W. (7404) Washington, DC 20460

Attn: Mr. Winston Lue

Re: Two-week notification of approval for Vector Group, Inc. to dispose of PCBs

Gentlemen:

Vector's PCB projected disposal activity for the referenced period is shown on the following table.

Period Covered: February 13, 1994 to February 24, 1994 USEPA ID NO. OH0000184879

Week No.	EPA Region	Most Probable Operating Date	Scheduled Dates and Times	No. of Sites	Central Location & Contact Phone No.
1 February 13 - February 17	V	February 15, 1995	February 13 - February 17 8:00 am - 5:00 pm	1	Clean Harbors of Chicago, Inc. 11800 South Stony Island Ave. Chicago, IL 60617 (312) 646-6381
2					The VGMDU will be demobilized and located in Cincinnati, Ohio

If you have any questions, please let me know.

Regards,

M. C. Durfee



February 10, 1995

United States Environmental Protection Agency Region V 77 West Jackson Boulevard Chicago, IL 60604-3507

Attn: Ms. Priscilla Fonseca

Re: Two-week notification of approval for Vector Group, Inc. to dispose of PCBs

Gentlemen:

Vector's PCB projected disposal activity for the referenced period is shown on the following table.

Period Covered: February 13, 1994 to February 24, 1994 USEPA ID NO. OH0000184879

Week No.	EPA Region	Most Probable Operating Date	Scheduled Dates and Times	No. of Sites	Central Location & Contact Phone No.
1 February 13 - February 17	V	February 15, 1995	February 13 - February 17 8:00 am - 5:00 pm	1	Clean Harbors of Chicago, Inc. 11800 South Stony Island Ave. Chicago, IL 60617 (312) 646-6381
2					The VGMDU will be demobilized and located in Cincinnati, Ohio

If you have any questions, please let me know.

Regards,

M. C. Durfee

February 17, 1995

United States Environmental Protection Agency Region V 77 West Jackson Boulevard Chicago, IL 60604-3507

Attn: Ms. Priscilla Fonseca

Re: Two-week notification of approval for Vector Group, Inc. to dispose of PCBs

Gentlemen:

Vector's PCB projected disposal activity for the referenced period is shown on the following table.

Period Covered: February 20, 1995 to March 3, 1995 USEPA ID NO. OH0000184879

Week No.	EPA Region	Most Probable Operating Date	Scheduled Dates and Times	No. of Sites	Central Location & Contact Phone No.
1 February 20 - February 24	V	February 23, 1995	February 20 - February 24 8:00 am - 5:00 pm	1	Clean Harbors of Chicago, Inc. 11800 South Stony Island Ave. Chicago, IL 60617 (312) 646-6381
2 February 27 - March 3					The VGMDU will be demobilized and located in Cincinnati, Ohio

If you have any questions, please let me know.

Regards,

M. C. Durfée Project Manager

1118 Ferris Road ■ Cincinnati, Ohio 45102 ■ Telephone: 513-752-8988 ■ Fax: 513-752-8811



February 17, 1995

United States Environmental Protection Agency 401 M Street, S.W. (7404) Washington, DC 20460

Attn: Mr. Winston Lue

Re: Two-week notification of approval for Vector Group, Inc. to dispose of PCBs

Gentlemen:

Vector's PCB projected disposal activity for the referenced period is shown on the following table.

Period Covered: February 20, 1995 to March 3, 1995 USEPA ID NO. OH0000184879

Week No.	EPA Region	Most Probable Operating Date	Scheduled Dates and Times	No. of Sites	Central Location & Contact Phone No.
1 February 20 - February 24	V	February 23, 1995	February 20 - February 24 8:00 am - 5:00 pm	1	Clean Harbors of Chicago, Inc. 11800 South Stony Island Ave. Chicago, IL 60617 (312) 646-6381
2 February 27 - March 3					The VGMDU will be demobilized and located in Cincinnati, Ohio

If you have any questions, please let me know.

Regards,

M. C. Durfee



February 27, 1995

United States Environmental Protection Agency 401 M Street, S.W. (7404) Washington, DC 20460

Attn: Mr. Winston Lue

Two-week notification of approval for Vector Group, Inc. to dispose of PCBs

Gentlemen:

Vector's PCB projected disposal activity for the referenced period is shown on the following table.

February 27, 1995 to March 10, 1995 USEPA ID NO. OH0000184879 Period Covered:

Week No.	EPA Region	Most Probable Operating Date	Scheduled Dates and Times	No. of Sites	Central Location & Contact Phone No.
l February 27 - March 3	V	February 28, 1995	February 27 - March 3 8:00 am - 5:00 pm	1	Clean Harbors of Chicago, Inc. 11800 South Stony Island Ave. Chicago, IL 60617 (312) 646-6381
2 March 6 - March 10	,				The VGMDU will be demobilized and located in Cincinnati, Ohio

If you have any questions, please let me know.

Regards,

M. C. Durfee



February 27, 1995

United States Environmental Protection Agency Region V 77 West Jackson Boulevard Chicago, IL 60604-3507

Attn: Ms. Priscilla Fonseca

Re: Two-week notification of approval for Vector Group, Inc. to dispose of PCBs

Gentlemen:

Vector's PCB projected disposal activity for the referenced period is shown on the following table.

Period Covered: February 27, 1995 to March 10, 1995 USEPA ID NO. OH0000184879

Week No.	EPA Region	Most Probable Operating Date	Scheduled Dates and Times	No. of Sites	Central Location & Contact Phone No.
1 February 27 - March 3	V	February 28, 1995	February 27 - March 3 8:00 am - 5:00 pm	1	Clean Harbors of Chicago, Inc. 11800 South Stony Island Ave. Chicago, IL 60617 (312) 646-6381
2 March 6 - March 10	·				The VGMDU will be demobilized and located in Cincinnati, Ohio

If you have any questions, please let me know.

Regards,

M. C. Durfee



March 3, 1995

United States Environmental Protection Agency 401 M Street, S.W. (7404) Washington, DC 20460

Attn: Mr. Winston Lue

Two-week notification of approval for Vector Group, Inc. to dispose of PCBs

Gentlemen:

Vector's PCB projected disposal activity for the referenced period is shown on the following table.

Period Covered: March 6, 1995 to March 117, 1995 USEPA ID NO. OH0000184879

Week No.	EPA Region	Most Probable Operating Date	Scheduled Dates and Times	No. of Sites	Central Location & Contact Phone No.
1 March 6 - March 10	V	March 6, 1995	March 6 - March 10 8:00 am - 5:00 pm	i	Clean Harbors of Chicago, Inc. 11800 South Stony Island Ave. Chicago, IL 60617 (312) 646-6381
2 March 13 - March 18					The VGMDU will be demobilized and located in Cincinnati, Ohio

If you have any questions, please let me know.

Regards,

M. C. Durfeé



March 3, 1995

United States Environmental Protection Agency Region V 77 West Jackson Boulevard Chicago, IL 60604-3507

Attn: Ms. Priscilla Fonseca

Re: Two-week notification of approval for Vector Group, Inc. to dispose of PCBs

Gentlemen:

Vector's PCB projected disposal activity for the referenced period is shown on the following table.

Period Covered: March 6, 1995 to March 117, 1995 USEPA ID NO. OH0000184879

Week No.	EPA Region	Most Probable Operating Date	Scheduled Dates and Times	No. of Sites	Central Location & Contact Phone No.
1 March 6 - March 10	V	March 6, 1995	March 6 - March 10 8:00 am - 5:00 pm	1	Clean Harbors of Chicago, Inc. 11800 South Stony Island Ave. Chicago, IL 60617 (312) 646-6381
2 March 13 - March 18					The VGMDU will be demobilized and located in Cincinnati, Ohio

If you have any questions, please let me know.

Regards,

M. C. Durfeé



March 10, 1995

United States Environmental Protection Agency Region V 77 West Jackson Boulevard Chicago, IL 60604-3507

Attn: Ms. Priscilla Fonseca

Re: Two-week notification of approval for Vector Group, Inc. to dispose of PCBs

Gentlemen:

Vector's PCB projected disposal activity for the referenced period is shown on the following table.

Period Covered: March 13, 1995 to March 24, 1995 USEPA ID NO. OH0000184879

Week No.	EPA Region	Most Probable Operating Date	Scheduled Dates and Times	No. of Sites	Central Location & Contact Phone No.
1 March 13 - March 17	V	March 13, 1995	March 13 - March 17 8:00 am - 5:00 pm	1	Clean Harbors of Chicago, Inc. 11800 South Stony Island Ave. Chicago, IL 60617 (312) 646-6381
2 March 20 - March 24					The VGMDU will be demobilized and located in Cincinnati, Ohio

If you have any questions, please let me know.

Regards,

M. C. Durfee



March 10, 1995

United States Environmental Protection Agency 401 M Street, S.W. (7404) Washington, DC 20460

Attn: Mr. Winston Lue

Re: Two-week notification of approval for Vector Group, Inc. to dispose of PCBs

Gentlemen:

Vector's PCB projected disposal activity for the referenced period is shown on the following table.

Period Covered: March 13, 1995 to March 24, 1995 USEPA ID NO. OH0000184879

Week No.	EPA Region	Most Probable Operating Date	Scheduled Dates and Times	No. of Sites	Central Location & Contact Phone No.
1 March 13 - March 17	V	March 13, 1995	March 13 - March 17 8:00 am - 5:00 pm	1	Clean Harbors of Chicago, Inc. 11800 South Stony Island Ave. Chicago, IL 60617 (312) 646-6381
2 March 20 - March 24					The VGMDU will be demobilized and located in Cincinnati, Ohio

If you have any questions, please let me know.

Regards,

M. C. Durfee



March 17, 1995

United States Environmental Protection Agency Region V 77 West Jackson Boulevard Chicago, IL 60604-3507

Attn:Ms. Priscilla Fonseca

Re: Two-week notification of approval for Vector Group, Inc. to dispose of PCBs

Gentlemen:

Vector's PCB projected disposal activity for the referenced period is shown on the following table.

Period Covered: March 20, 1995 to March 31, 1995 USEPA ID NO. OH0000184879

Week No.	EPA Region	Most Probable Operating Date	Scheduled Dates and Times	No. of Sites	Central Location & Contact Phone No.
l March 20 - March 24	V	March 20, 1995	March 20 - March 24 8:00 am - 5:00 pm	1	Clean Harbors of Chicago, Inc. 11800 South Stony Island Ave. Chicago, IL 60617 (312) 646-6381
2 March 27 - March 31	,ø				The VGMDU will be demobilized and located in Cincinnati, Ohio

If you have any questions, please let me know.

Regards,

M. C. Durfee



March 17, 1995

United States Environmental Protection Agency 401 M Street, S.W. (7404) Washington, DC 20460

Attn: Mr. Winston Lue

Re: Two-week notification of approval for Vector Group, Inc. to dispose of PCBs

Gentlemen:

Vector's PCB projected disposal activity for the referenced period is shown on the following table.

Period Covered: March 20, 1995 to March 31, 1995 USEPA ID NO. OH0000184879

Week No.	EPA Region	Most Probable Operating Date	Scheduled Dates and Times	No. of Sites	Central Location & Contact Phone No.
1 March 20 - March 24	V	March 20, 1995	March 20 - March 24 8:00 am - 5:00 pm	1	Clean Harbors of Chicago, Inc. 11800 South Stony Island Ave. Chicago, IL 60617 (312) 646-6381
2 March 27 - March 31			,		The VGMDU will be demobilized and located in Cincinnati, Ohio

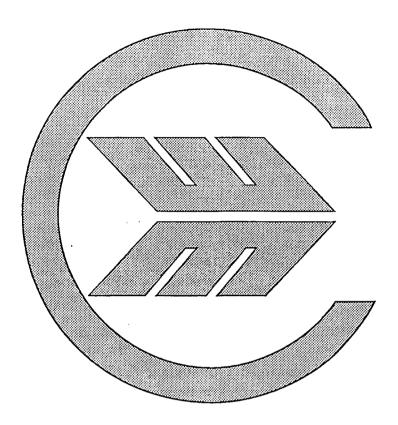
If you have any questions, please let me know.

Regards,

M. C. Durfee

APPENDIX C

ANALYTICAL DATA



Waste Analysis Report

Chemical Waste Management - Riverdale

Sample Id:

200086330

Date Sampled:

22-MAR-95

Date Logged:

22-MAR-95

Waste Profile Number:

Source:

MIS

Generator Name:

INC/CLEAN HARBORS

Generator Location:

CHICAGO, IL

Waste Name:

CENTER TOP OF RAM PLATE

Site Number:

'Samplerid: 200086330

No SOLID PCBS WIPE - LIMIT Comments

Waste Profile No:

Lab Asystant No:

This Report is intended for the use and benefit of Waste Management and its companies. No representation concerning significance of the reported data is made to any other person or entity.

Result		Analysis Date
quested		
nts		
Result	Unit	Analysis Date
s Requested		
ments		
Result	Unit	Analysis Date
s Requested		
ments		
IMIT Result	Unit	Analysis Date
1.50 3.63	ug ug	03/22/95 03/22/95
	quested Result Requested Result Result Result Result Result Requested	result Unit Result Unit Requested Result Unit Result Unit Result Unit Result Unit

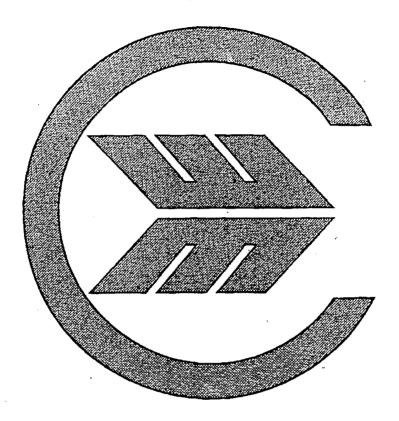
This Report is intended for the use and benefit of Waste Management and its companies. No representation concerning significance of the reported data is made to any other person or entity.

CERTIFICATION: Except as explicitly noted, all analytical data reported above were obtained under my direction and supervision. For Chemical Waste Management, Inc. companies, sample preparation and analytical methods and analytical equipment specified or approved in the facility's waste analysis plan were used in conducting this analysis. This laboratory follows a quality assurance control program.

Report Date Mar 22,

Approved:

Carl W. Armbruster, Asst Laboratory Manager



Waste Analysis Report

Chemical Waste Management - Riverdale

Sample Id:

200086323

Date Sampled:

21-MAR-95

Date Logged:

21-MAR-95

Waste Profile Number:

Source:

MIS

Generator Name:

INC/CLEAN HARBORS

Generator Location:

CHICAGO, IL

Waste Name:

CENTER OF BOTTOM OF RAM PLATE

Site Number:

Sample ld: 200086323

Waste Profile No:

Lab Asystant No:

This Report is intended for the use and benefit of Waste Management and its companies. No representation concerning significance of the reported data is made to any other person or entity.

FINGERPRINT

Result

Analysis Date

No FINGERPRINT Tests Requested

COMMENTS:

No FINGERPRINT Comments

WET CHEMISTRY

Result

Unit

Analysis Date

No WET CHEMISTRY Tests Requested

COMMENTS:

No WET CHEMISTRY Comments

SPECTROSCOPY

Result

Unit

Analysis Date

No SPECTROSCOPY Tests Requested

COMMENTS:

No SPECTROSCOPY Comments

SOLID PCBS WIPE - LIMIT AROCHLOR 1254 AROCHLOR 1242 Result

Unit

Analysis Date

1.68 5.31 ug

03/21/95 03/21/95

COMMENTS:

No SOLID PCBS WIPE - LIMIT Comments

Waste Profile No:

Lab Asystant No:

This Report is intended for the use and benefit of Waste Management and its companies. No representation concerning significance of the reported data is made to any other person or entity.

CERTIFICATION: Except as explicitly noted, all analytical data reported above were obtained under my direction and supervision. For Chemical Waste Management, Inc. companies, sample preparation and analytical methods and analytical equipment specified or approved in the facility's waste analysis plan were used in conducting this analysis. This laboratory follows a quality assurance control program.

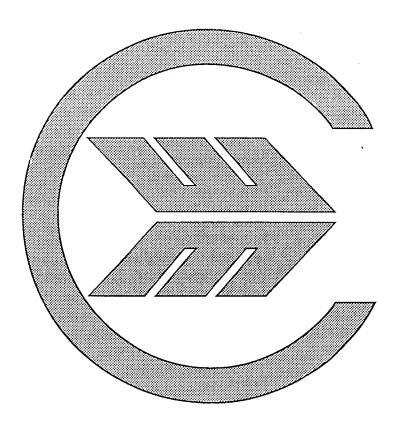
Report Date

Sample Id: 200086323

Approved:

alaka l

Armbruster, Assi Laboratory Manage



Waste Analysis Report

Chemical Waste Management - Riverdale

Sample Id:

200086332

Date Sampled:

22-MAR-95

Date Logged:

22-MAR-95

Waste Profile Number:

Source:

MIS

Generator Name:

INC/CLEAN HARBORS

Generator Location:

CHICAGO, IL

Waste Name:

HORIZONTAL CENTER OF BOTH INSIDE WALLS

Site Number:

No SOLID PCBS WIPE - LIMIT Comments

Waste Profile No:

Lab Asystant No:

This Report is intended for the use and benefit of Waste Management and its companies. No representation concerning significance of the reported data is made to any other person or entity.

	FINGERPRINT	Result		Analysis Date
	No FINGERPRINT Tests Requested			
	COMMENTS:			
	No FINGERPRINT Comments			
	WET CHEMISTRY	Result	Unit	Analysis Date
ı	No WET CHEMISTRY Tests Requested			
	COMMENTS:			
:	No WET CHEMISTRY Comments			
	SPECTROSCOPY	Result	Unit	Analysis Date
	No SPECTROSCOPY Tests Requested			
	COMMENTS:			,
	No SPECTROSCOPY Comments			
	SOLID PCBS WIPE - LIMIT	Result	Unit	Analysis Date
:	AROCHLOR 1254 AROCHLOR 1242	1.09 2.94	ug ug	03/22/95 03/22/95
;	COMMENTS:	2.0 .	29	00, ==, 00

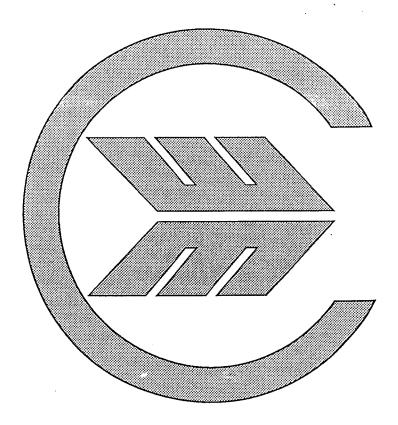
This Report is intended for the use and benefit of Waste Management and its companies. No representation concerning significance of the reported data is made to any other person or entity.

CERTIFICATION: Except as explicitly noted, all analytical data reported above were obtained under my direction and supervision. For Chemical Waste Management, Inc. companies, sample preparation and analytical methods and analytical equipment specified or approved in the facility's waste analysis plan were used in conducting this analysis. This laboratory follows a quality assurance control program.

Report Date Mar 22,

Approved.

Carl W. Armbruster, Asst Laboratory Manager



Waste Analysis Report

Chemical Waste Management - Riverdale

Sample Id:

200086331

Date Sampled:

22-MAR-95

Date Logged:

22-MAR-95

Waste Profile Number:

Source:

MIS

Generator Name:

INC/CLEAN HARBORS

Generator Location:

CHICAGO, IL

Waste Name:

HORIZONTAL & VERTICAL CENTER OF WEST WAL

Site Number:

'Sample ld: 200086331

Waste Profile No:

Lab Asystant No:

This Report is intended for the use and benefit of Waste Management and its companies. No representation concerning significance of the reported data is made to any other person or entity.

FINGERPRINT Result **Analysis Date** No FINGERPRINT Tests Requested **COMMENTS:** No FINGERPRINT Comments **WET CHEMISTRY** Result **Analysis Date** Unit No WET CHEMISTRY Tests Requested **COMMENTS:** No WET CHEMISTRY Comments **SPECTROSCOPY** Result Unit **Analysis Date** No SPECTROSCOPY Tests Requested **COMMENTS:** No SPECTROSCOPY Comments **SOLID PCBS WIPE - LIMIT** Result Unit **Analysis Date** Total Arochlors is < 3.6 ug 03/22/95

COMMENTS:

No SOLID PCBS WIPE - LIMIT Comments

Sample ld: 200086331

Waste Profile No:

Lab Asystant No:

This Report is intended for the use and benefit of Waste Management and its companies. No representation concerning significance of the reported data is made to any other person or entity.

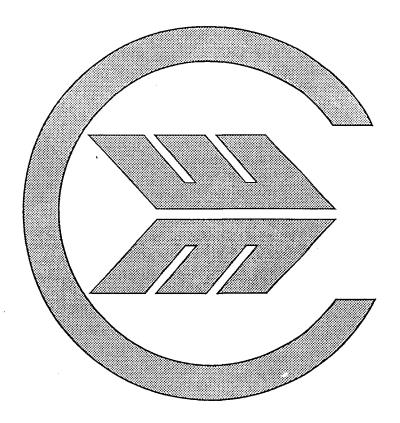
CERTIFICATION: Except as explicitly noted, all analytical data reported above were obtained under my direction and supervision. For Chemical Waste Management, Inc. companies, sample preparation and analytical methods and analytical equipment specified or approved in the facility's waste analysis plan were used in conducting this analysis. This laboratory follows a quality assurance control program.

Report Date

Mar 22, 199

Approved:

Carl W. Armbruster, Asst Laboratory Manager



Waste Analysis Report

Chemical Waste Management - Riverdale

Sample Id:

200086333

Date Sampled:

22-MAR-95

Date Logged:

22-MAR-95

Waste Profile Number:

Source:

MIS

Generator Name:

INC/CLEAN HARBORS

Generator Location:

CHICAGO, IL

Waste Name:

SIDE OF SECOND EAST TOOTH

Site Number:

Waste Profile No:

Lab Asystant No:

This Report is intended for the use and benefit of Waste Management and its companies. No representation concerning significance of the reported data is made to any other person or entity.

FINGERPRINT

Result

Analysis Date

No FINGERPRINT Tests Requested

COMMENTS:

No FINGERPRINT Comments

WET CHEMISTRY

Result

Unit

Analysis Date

No WET CHEMISTRY Tests Requested

COMMENTS:

No WET CHEMISTRY Comments

SPECTROSCOPY

Result

Unit

Analysis Date

No SPECTROSCOPY Tests Requested

COMMENTS:

No SPECTROSCOPY Comments

SOLID PCBS WIPE - LIMIT

Result

Unit

Analysis Date

AROCHLOR 1242

2.22

ug

03/22/95

COMMENTS:

No SOLID PCBS WIPE - LIMIT Comments

Waste Profile No:

Lab Asystant No:

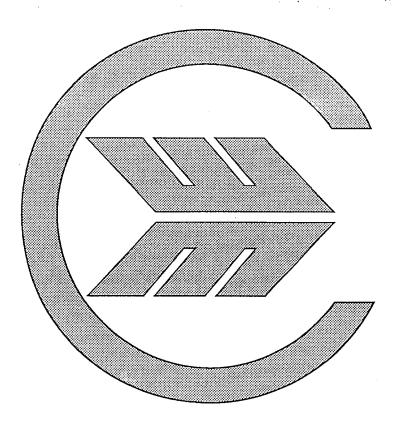
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Report Date Mar 22,

Approved:

Carl W. Armbruster, Asst Laboratory Manager



Waste Analysis Report

Chemical Waste Management - Riverdale

Sample Id:

200086350

Date Sampled:

22-MAR-95

Date Logged:

22-MAR-95

Waste Profile Number:

Source:

MIS

Generator Name:

INC/CLEAN HARBORS

Generator Location:

CHICAGO, IL

Waste Name:

SIDE OF SECOND TOOTH BY WEST END

Site Number:

Sample ld: 200086350

No SOLID PCBS WIPE - LIMIT Comments

Waste Profile No:

Lab Asystant No:

This Report is intended for the use and benefit of Waste Management and its companies. No representation concerning significance of the reported data is made to any other person or entity.

FINGERPRINT	Result		Analysis Date
No FINGERPRINT Tests Requested			
COMMENTS:			
No FINGERPRINT Comments			
WET CHEMISTRY	Result	Unit	Analysis Date
No WET CHEMISTRY Tests Requested			
COMMENTS:			
No WET CHEMISTRY Comments			
SPECTROSCOPY	Result	Unit	Analysis Date
No SPECTROSCOPY Tests Requested			
COMMENTS:		,	
No SPECTROSCOPY Comments			
SOLID PCBS WIPE - LIMIT	Result	Unit	Analysis Date
AROCHLOR 1242	4.66	ug	03/23/95
COMMENTS:			
	No FINGERPRINT Tests Requested COMMENTS: No FINGERPRINT Comments WET CHEMISTRY No WET CHEMISTRY Tests Requested COMMENTS: No WET CHEMISTRY Comments SPECTROSCOPY No SPECTROSCOPY Tests Requested COMMENTS: No SPECTROSCOPY Comments SOLID PCBS WIPE - LIMIT AROCHLOR 1242	No FINGERPRINT Tests Requested COMMENTS: No FINGERPRINT Comments WET CHEMISTRY Result No WET CHEMISTRY Tests Requested COMMENTS: No WET CHEMISTRY Comments SPECTROSCOPY Result No SPECTROSCOPY Tests Requested COMMENTS: No SPECTROSCOPY Comments SOLID PCBS WIPE - LIMIT AROCHLOR 1242 4.66	No FINGERPRINT Tests Requested COMMENTS: No FINGERPRINT Comments WET CHEMISTRY Result Unit No WET CHEMISTRY Tests Requested COMMENTS: No WET CHEMISTRY Comments SPECTROSCOPY Result Unit No SPECTROSCOPY Tests Requested COMMENTS: No SPECTROSCOPY Comments SOLID PCBS WIPE - LIMIT AROCHLOR 1242 4.66 Unit

Waste Profile No:

Lab Asystant No:

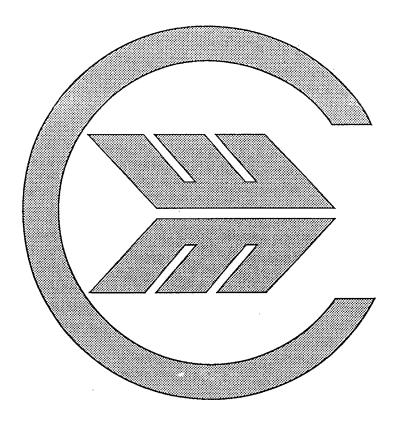
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Laboratory Mana

Report Date Mar 23, 1995

Approved:



Waste Analysis Report

Chemical Waste Management - Riverdale

Sample Id:

200086351

Date Sampled:

22-MAR-95

Date Logged:

22-MAR-95

Waste Profile Number:

Source:

MIS

Generator Name:

INC/CLEAN HARBORS

Generator Location:

CHICAGO, IL

Waste Name:

SIDE OF THE CENTER TOOTH

Site Number:

No SOLID PCBS WIPE - LIMIT Comments

Waste Profile No:

Lab Asystant No:

This Report is intended for the use and benefit of Waste Management and its companies. No representation concerning significance of the reported data is made to any other person or entity.

	FINGERPRINT	Result		Analysis Date
	No FINGERPRINT Tests Requested			
	COMMENTS:			
	No FINGERPRINT Comments		•	
	WET CHEMISTRY	Result	Unit	Analysis Date
	No WET CHEMISTRY Tests Requested			
	COMMENTS:			
:	No WET CHEMISTRY Comments			
	SPECTROSCOPY	Result	Unit	Analysis Date
	No SPECTROSCOPY Tests Requested			
	COMMENTS:		•	
	No SPECTROSCOPY Comments			
:	SOLID PCBS WIPE - LIMIT	Result	Unit	Analysis Date
	AROCHLOR 1254 AROCHLOR 1242	1.57 6.75	ug ug	03/23/95 03/23/95
	COMMENTS:			

Waste Profile No:

Lab Asystant No:

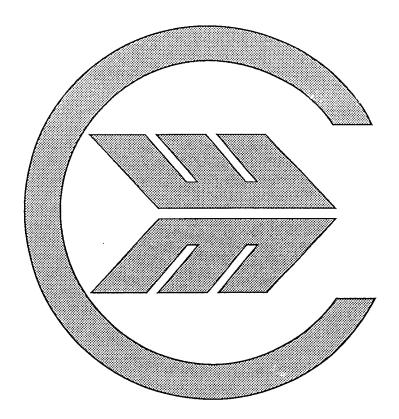
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Report Date Mar 23, 1995

Approved:

lar A. Crowley, Laboratory Manage



Waste Analysis Report

Chemical Waste Management - Riverdale

Sample Id:

200086352

Date Sampled:

22-MAR-95

Date Logged:

22-MAR-95

Waste Profile Number:

Source:

MIS

Generator Name:

INC/CLEAN HARBORS

Generator Location:

CHICAGO, IL

Waste Name:

HOUSING WALL UNDER SHREDDER TEETH

Site Number:

No SOLID PCBS WIPE - LIMIT Comments

Waste Profile No:

Lab Asystant No:

This Report is intended for the use and benefit of Waste Management and its companies. No representation concerning significance of the reported data is made to any other person or entity.

	FINGERPRINT No FINGERPRINT Tests Requested COMMENTS: No FINGERPRINT Comments	Result		Analysis Date
	WET CHEMISTRY No WET CHEMISTRY Tests Requested COMMENTS: No WET CHEMISTRY Comments	Result	Unit	Analysis Date
	SPECTROSCOPY No SPECTROSCOPY Tests Requested COMMENTS: No SPECTROSCOPY Comments	Result	Unit	Analysis Date
:	SOLID PCBS WIPE - LIMIT AROCHLOR 1242 COMMENTS:	Result 2.47	Unit ug	Analysis Date 03/23/95

Waste Profile No:

Lab Asystant No:

This Report is intended for the use and benefit of Wasto Management and its companies. No representation concerning significance of the reported data is made to any other person or entity.

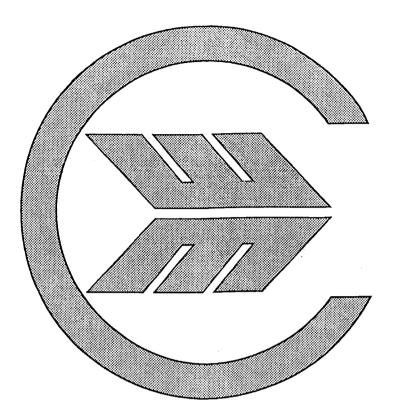
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Report Date Mar 23, 1995

Approved:

Mary A. ¢rowley,

Laboratory Manager



Waste Analysis Report

Chemical Waste Management - Riverdale

Sample Id:

200086062

Date Sampled:

09-MAR-95

Date Logged:

09-MAR-95

Waste Profile Number:

Source:

MIS

Generator Name:

INC/CLEAN HARBORS

Generator Location:

CHICAGO, IL

Waste Name:

NORTH SECOND TOOTH

Site Number:

Sample ld: 200086062

No SOLID PCBS WIPE - LIMIT Comments

Waste Profile No:

Lab Asystant No:

This Report is intended for the use and benefit of Waste Management and its companies. No representation concerning significance of the reported data is made to any other person or entity.

	FINGERPRINT	Result		Analysis Date
-	No FINGERPRINT Tests Requested	·		
	COMMENTS:			
	No FINGERPRINT Comments			
	WET CHEMISTRY	Result	Unit	Analysis Date
	No WET CHEMISTRY Tests Requested			
	COMMENTS:			
	No WET CHEMISTRY Comments			
	SPECTROSCOPY	Result	Unit	Analysis Date
	No SPECTROSCOPY Tests Requested			·
	COMMENTS:			
	No SPECTROSCOPY Comments			
	SOLID PCBS WIPE - LIMIT	Result	Unit	Analysis Date
	AROCHLOR 1242 AROCHLOR 1254	11.3 3.40	ug ug	03/11/95 03/11/95
	COMMENTS:		Ţ.	

Sample ld: 200086062

Waste Profile No:

Lab Asystant No:

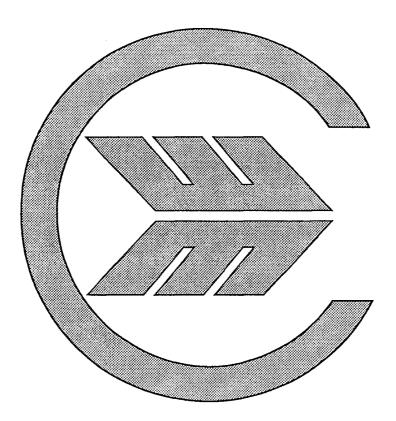
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Report Date Mar 11, 1995

Approved:

Dewey D/Hitt, Supervisor - Spectroscopy



Waste Analysis Report

Chemical Waste Management - Riverdale

Sample Id:

200086063

Date Sampled:

09-MAR-95

Date Logged:

09-MAR-95

Waste Profile Number:

Source:

MIS

Generator Name:

INC/CLEAN HARBORS

Generator Location:

CHICAGO, IL

Waste Name:

SOUTH SECOND TOOTH

Site Number:

No SOLID PCBS WIPE - LIMIT Comments

Waste Profile No:

Lab Asystant No:

This Report is intended for the use and benefit of Waste Management and its companies. No representation concerning significance of the reported data is made to any other person or entity.

FINGERPRINT No FINGERPRINT Tests Requested COMMENTS: No FINGERPRINT Comments	Result		Analysis Date
WET CHEMISTRY No WET CHEMISTRY Tests Requested COMMENTS: No WET CHEMISTRY Comments	Result	Unit	Analysis Date
SPECTROSCOPY No SPECTROSCOPY Tests Requested COMMENTS: No SPECTROSCOPY Comments	Result	Unit	Analysis Date
SOLID PCBS WIPE - LIMIT	Result	Unit	Analysis Date

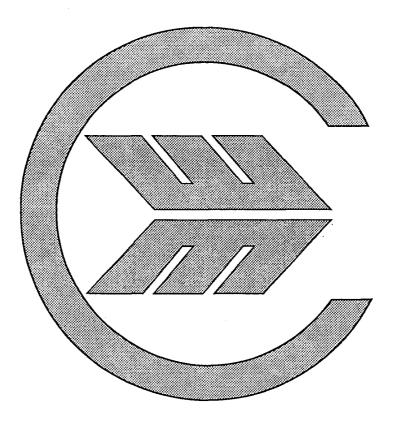
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Report Date Mar 11, 1995

Approved:

Dewey D. Hitt, Supervisor - Spectroscopy



Waste Analysis Report

Chemical Waste Management - Riverdale

Sample Id:

200086064

Date Sampled:

09-MAR-95

Date Logged:

09-MAR-95

Waste Profile Number:

Source:

MIS

Generator Name:

INC/CLEAN HARBORS

Generator Location:

CHICAGO, IL

Waste Name:

CENTER TOOTH

Site Number:

Waste Profile No:

Lab Asystant No:

This Report is intended for the use and benefit of Waste Management and its companies. No representation concerning significance of the reported data is made to any other person or entity.

-	FINGERPRINT	Result		Analysis Date
	No FINGERPRINT Tests Requested			
	COMMENTS:			
	No FINGERPRINT Comments			
	WET CHEMISTRY	Result	Unit	Analysis Date
	No WET CHEMISTRY Tests Requested			
	COMMENTS:			
	No WET CHEMISTRY Comments			
	SPECTROSCOPY	Result	Unit	Analysis Date
	No SPECTROSCOPY Tests Requested			
	COMMENTS:		,	
!	No SPECTROSCOPY Comments			
	SOLID PCBS WIPE - LIMIT	Result	Unit	Analysis Date
	AROCHLOR 1254 AROCHLOR 1242	26.2 70.7	ug ug	03/11/95 03/11/95

COMMENTS:

No SOLID PCBS WIPE - LIMIT Comments

Waste Profile No:

Lab Asystant No:

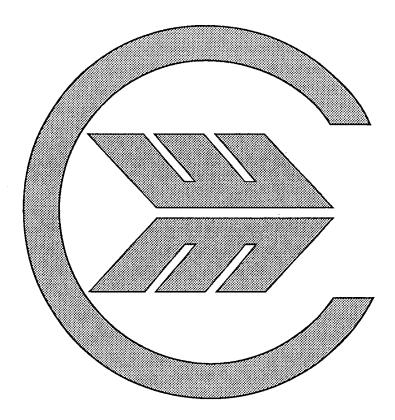
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Report Date Mar 11, 1995

Approved:

Dewey D/Hitt, Supervisor - Spectroscopy/



Waste Analysis Report

Chemical Waste Management - Riverdale

Sample Id:

200086065

Date Sampled:

09-MAR-95

Date Logged:

09-MAR-95

Waste Profile Number:

Source:

MIS

Generator Name:

INC/CLEAN HARBORS

Generator Location:

CHICAGO, IL

Waste Name:

CENTER WITH PARALLEL TO TOOTH AXLE

Site Number:

No SOLID PCBS WIPE - LIMIT Comments

Waste Profile No:

Lab Asystant No:

This Report is intended for the use and benefit of Waste Management and its companies. No representation concerning significance of the reported data is made to any other person or entity.

FINGERPRINT	Result		Analysis Date
No FINGERPRINT Tests Requested			
COMMENTS:			
No FINGERPRINT Comments			
WET CHEMISTRY	Result	Unit	Analysis Date
No WET CHEMISTRY Tests Requested			
COMMENTS:			
No WET CHEMISTRY Comments			
SPECTROSCOPY	Result	Unit	Analysis Date
No SPECTROSCOPY Tests Requested			
COMMENTS:		•	
No SPECTROSCOPY Comments			
SOLID PCBS WIPE - LIMIT	Result	Unit	Analysis Date
AROCHLOR 1242 AROCHLOR 1254	16.7 6.65	ug	03/11/95 03/11/95
COMMENTS:			
	No FINGERPRINT Tests Requested COMMENTS: No FINGERPRINT Comments WET CHEMISTRY No WET CHEMISTRY Tests Requested COMMENTS: No WET CHEMISTRY Comments SPECTROSCOPY No SPECTROSCOPY Tests Requested COMMENTS: No SPECTROSCOPY Comments SOLID PCBS WIPE - LIMIT AROCHLOR 1242 AROCHLOR 1254	No FINGERPRINT Tests Requested COMMENTS: No FINGERPRINT Comments WET CHEMISTRY Result No WET CHEMISTRY Tests Requested COMMENTS: No WET CHEMISTRY Comments SPECTROSCOPY Result No SPECTROSCOPY Tests Requested COMMENTS: No SPECTROSCOPY Comments SOLID PCBS WIPE - LIMIT AROCHLOR 1242 AROCHLOR 1254 16.7 6.65	No FINGERPRINT Tests Requested COMMENTS: No FINGERPRINT Comments WET CHEMISTRY Result Unit No WET CHEMISTRY Tests Requested COMMENTS: No WET CHEMISTRY Comments SPECTROSCOPY Result Unit No SPECTROSCOPY Tests Requested COMMENTS: No SPECTROSCOPY Comments SOLID PCBS WIPE - LIMIT AROCHLOR 1242 AROCHLOR 1242 AROCHLOR 1254 16.7 4.09 4.00

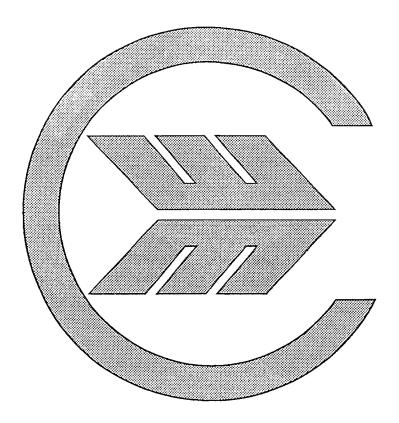
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Report Date Mar 11, 1995

Approved:

Dewey D Hitt, Supervisor - Spectroscopy



Waste Analysis Report

Chemical Waste Management - Riverdale

Sample Id:

200086353

Date Sampled:

22-MAR-95

Date Logged:

22-MAR-95

Waste Profile Number:

Source:

MIS

Generator Name:

INC/CLEAN HARBORS

Generator Location:

CHICAGO, IL

Waste Name:

UNDERSIDE OF NORTH RAM PLATE

Site Number:

No SOLID PCBS WIPE - LIMIT Comments

Waste Profile No:

Lab Asystant No:

This Report is intended for the use and benefit of Waste Management and its companies. No representation concerning significance of the reported data is made to any other person or entity.

FINGERPRINT No FINGERPRINT Tests Requested COMMENTS:	Result		Analysis Date
No FINGERPRINT Comments			
WET CHEMISTRY	Result	Unit	Analysis Date
No WET CHEMISTRY Tests Requested			
COMMENTS:			
No WET CHEMISTRY Comments			
SPECTROSCOPY	Result	Unit	Analysis Date
No SPECTROSCOPY Tests Requested			
COMMENTS:			
No SPECTROSCOPY Comments		•	
SOLID PCBS WIPE - LIMIT	Result	Unit	Analysis Date
Total Arochlors is	< .36	ug	03/23/95
COMMENTS:			

Waste Profile No:

Lab Asystant No:

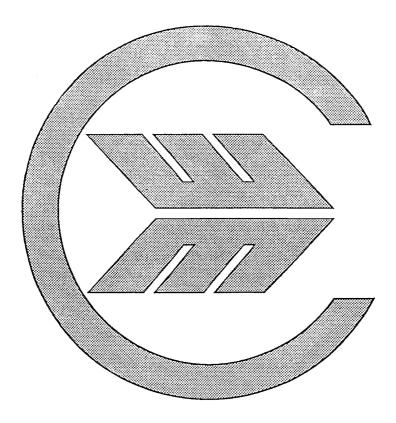
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Report Date Mar 23, 1995

Approved:

Mary A. Crowley, Laboratory Manager



Waste Analysis Report

Chemical Waste Management - Riverdale

Sample Id:

200086354

Date Sampled:

22-MAR-95

Date Logged:

22-MAR-95

Waste Profile Number:

Source:

MIS

Generator Name:

INC/CLEAN HARBORS

Generator Location:

CHICAGO, IL

Waste Name:

UNDERSIDE OF SOUTH RAM PLATE

Site Number:

No SOLID PCBS WIPE - LIMIT Comments

Waste Profile No:

Lab Asystant No:

This Report is intended for the use and benefit of Waste Management and its companies. No representation concerning significance of the reported data is made to any other person or entity.

FINGERPRINT	Result		Analysis Date
No FINGERPRINT Tests Requested			
COMMENTS:			
No FINGERPRINT Comments			
WET CHEMISTRY	Result	Unit	Analysis Date
No WET CHEMISTRY Tests Requested			
COMMENTS:			
No WET CHEMISTRY Comments			
SPECTROSCOPY	Result	Unit	Analysis Date
No SPECTROSCOPY Tests Requested			
COMMENTS:		•	
No SPECTROSCOPY Comments			
SOLID PCBS WIPE - LIMIT	Result	Unit	Analysis Date
AROCHLOR 1242	1.77	ug	03/23/95
COMMENTS:			

Waste Profile No:

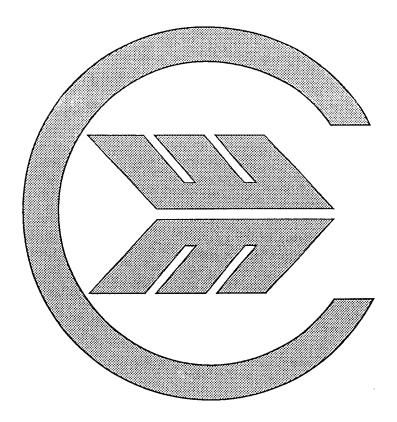
Lab Asystant No:

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Report Date Mar 23, 1995

Approved:



Waste Analysis Report

Chemical Waste Management - Riverdale

Sample Id:

200086374

Date Sampled:

23-MAR-95

Date Logged:

23-MAR-95

Waste Profile Number:

Source:

MIS

Generator Name:

INC/CLEAN HARBORS

Generator Location:

CHICAGO, IL

Waste Name:

FLOOR UNDER THE NORTH PLATE

Site Number:

No SOLID PCBS WIPE - LIMIT Comments

Waste Profile No:

Lab Asystant No:

This Report is intended for the use and benefit of Waste Management and its companies. No representation concerning significance of the reported data is made to any other person or entity.

FINGERPRINT	Result		Analysis Date
No FINGERPRINT Tests Requested			
COMMENTS:			
No FINGERPRINT Comments			٠
WET CHEMISTRY	Result	Unit	Analysis Date
No WET CHEMISTRY Tests Requested			
COMMENTS:			
No WET CHEMISTRY Comments			
SPECTROSCOPY	Result	Unit	Analysis Date
No SPECTROSCOPY Tests Requested			
COMMENTS:			
No SPECTROSCOPY Comments			
SOLID PCBS WIPE - LIMIT	Result	Unit	Analysis Date
AROCHLOR 1254 AROCHLOR 1242	1.14 4.66	ug ug	03/24/95 03/24/95
COMMENTS:			
	No FINGERPRINT Tests Requested COMMENTS: No FINGERPRINT Comments WET CHEMISTRY No WET CHEMISTRY Tests Requested COMMENTS: No WET CHEMISTRY Comments SPECTROSCOPY No SPECTROSCOPY Tests Requested COMMENTS: No SPECTROSCOPY Comments SOLID PCBS WIPE - LIMIT AROCHLOR 1254 AROCHLOR 1242	No FINGERPRINT Tests Requested COMMENTS: No FINGERPRINT Comments WET CHEMISTRY Result No WET CHEMISTRY Tests Requested COMMENTS: No WET CHEMISTRY Comments SPECTROSCOPY Result No SPECTROSCOPY Tests Requested COMMENTS: No SPECTROSCOPY Comments SOLID PCBS WIPE - LIMIT AROCHLOR 1254 AROCHLOR 1242 1.14 AROCHLOR 1242	No FINGERPRINT Tests Requested COMMENTS: No FINGERPRINT Comments WET CHEMISTRY Result Unit No WET CHEMISTRY Tests Requested COMMENTS: No WET CHEMISTRY Comments SPECTROSCOPY Result Unit No SPECTROSCOPY Tests Requested COMMENTS: No SPECTROSCOPY Comments SOLID PCBS WIPE - LIMIT Result Unit AROCHLOR 1254 AROCHLOR 1242 4.66 Ug

Sample Id: 200086374 Waste Profile No:

Lab Asystant No:

This Report is intended for the use and benefit of Waste Management and its companies. No representation concerning significance of the reported data is made to any other person or entity.

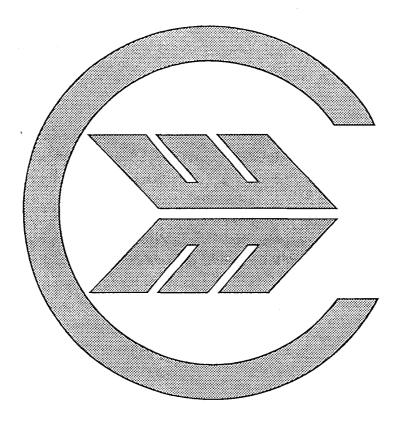
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Report Date Mar 24,

Mar 24, 199

Approved:

Carl W. Armbruster, Asst Laboratory Manager



Waste Analysis Report

Chemical Waste Management - Riverdale

Sample Id:

200086524

Date Sampled:

01-APR-95

Date Logged:

03-APR-95

Waste Profile Number:

Source:

MIS

Generator Name:

INC/CLEAN HARBORS

Generator Location:

CHICAGO, IL

Waste Name:

SOUTH WEST CORNER OF DRUM CRUSHER

Site Number:

No SOLID PCBS WIPE - LIMIT Comments

Waste Profile No:

Lab Asystant No:

This Report is intended for the use and benefit of Waste Management and its companies. No representation concerning significance of the reported data is made to any other person or entity.

			· · · · · · · · · · · · · · · · · · ·
FINGERPRINT	Result		Analysis Date
No FINGERPRINT Tests Requested			
COMMENTS:			
No FINGERPRINT Comments			
WET CHEMISTRY	Result	Unit	Analysis Date
No WET CHEMISTRY Tests Requested			
COMMENTS:			
No WET CHEMISTRY Comments			
SPECTROSCOPY	Result	Unit	Analysis Date
No SPECTROSCOPY Tests Requested			
COMMENTS:			
No SPECTROSCOPY Comments			
SOLID PCBS WIPE - LIMIT	Result	Unit	Analysis Date
AROCHLOR 1242	2.58	ug	04/03/95
COMMENTS:			

Waste Profile No:

Lab Asystant No:

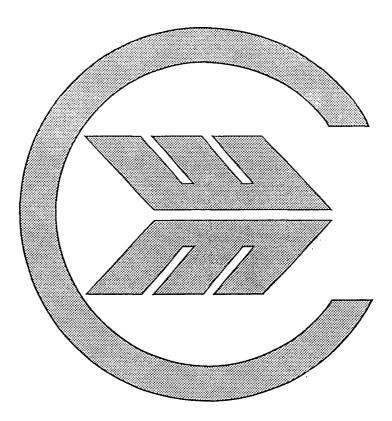
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Report Date Apr 3, 1995

Approved:

James E. Curlett, Supervisor - Organic Chemistry



Waste Analysis Report

Chemical Waste Management - Riverdale

Sample Id:

200086376

Date Sampled:

23-MAR-95

Date Logged:

23-MAR-95

Waste Profile Number:

Source:

MIS

Generator Name:

INC/CLEAN HARBORS

Generator Location:

CHICAGO, IL

Waste Name:

6" FROM BOTTOM HORIZONTAL CENTER OF DOOR

Site Number:

. Sample ld: 200086376

No SOLID PCBS WIPE - LIMIT Comments

Waste Profile No:

Lab Asystant No:

This Report is intended for the use and benefit of Waste Management and its companies. No representation concerning significance of the reported data is made to any other person or entity.

FINGERPRINT	Result		Analysis Date
No FINGERPRINT Tests Requested			,
COMMENTS:			
No FINGERPRINT Comments			
WET CHEMISTRY	Result	Unit	Analysis Dat
No WET CHEMISTRY Tests Requested			
COMMENTS:			
No WET CHEMISTRY Comments			
SPECTROSCOPY	Result	Unit	Analysis Dat
No SPECTROSCOPY Tests Requested			
COMMENTS:			
No SPECTROSCOPY Comments			
SOLID PCBS WIPE - LIMIT	Result	Unit	Analysis Da
Total Arochlors is	< .36	ug	03/24/95
COMMENTS:			

Waste Profile No:

Lab Asystant No:

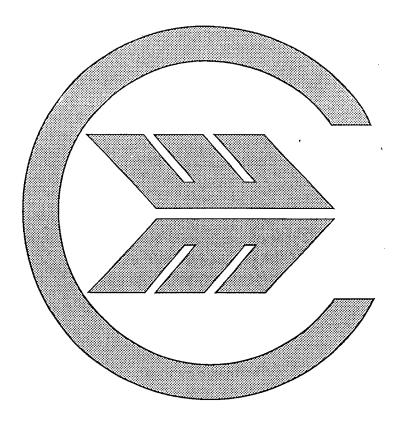
This Report is intended for the use and benefit of Waste Management and its companies. No representation concerning significance of the reported data is made to any other person or entity.

CERTIFICATION: Except as explicitly noted, all analytical data reported above were obtained under my direction and supervision. For Chemical Waste Management, Inc. companies, sample preparation and analytical methods and analytical equipment specified or approved in the facility's waste analysis plan were used in conducting this analysis. This laboratory follows a quality assurance control program.

Report Date Mar 24, 1995

Approved:

Carl W. Armbruster, Asst Laboratory Manage



Waste Analysis Report

Chemical Waste Management - Riverdale

Sample Id:

200086377

Date Sampled:

23-MAR-95

Date Logged:

23-MAR-95

Waste Profile Number:

Source:

MIS

Generator Name:

INC/CLEAN HARBORS

Generator Location:

CHICAGO, IL

Waste Name:

CENTER OF DOOR

Site Number:

Waste Profile No:

Lab Asystant No:

This Report is intended for the use and benefit of Waste Management and its companies. No representation concerning significance of the reported data is made to any other person or entity.

FINGERPRINT

Result

Analysis Date

No FINGERPRINT Tests Requested

COMMENTS:

No FINGERPRINT Comments

WET CHEMISTRY

Result

Unit

Analysis Date

No WET CHEMISTRY Tests Requested

COMMENTS:

No WET CHEMISTRY Comments

SPECTROSCOPY

Result

Unit

Analysis Date

No SPECTROSCOPY Tests Requested

COMMENTS:

No SPECTROSCOPY Comments

SOLID PCBS WIPE - LIMIT

Result

Unit

Analysis Date

Total Arochlors is

< .36

ug

03/24/95

COMMENTS:

No SOLID PCBS WIPE - LIMIT Comments

sample ld: 200086377

Waste Profile No:

Lab Asystant No:

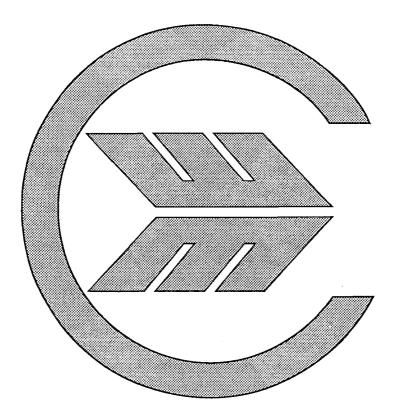
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Report Date Mar 24, 1995

Approved: [

Carl W. Armbruster, Asst Laboratory Manager



Waste Analysis Report

Chemical Waste Management - Riverdale

Sample Id:

200085965

Date Sampled:

06-MAR-95

Date Logged:

07-MAR-95

Waste Profile Number:

Source:

MIS

Generator Name:

CWM/CLEAN HARBORS

Generator Location:

CHICAGO, IL

Waste Name:

6" FROM BOTTOM FLOOR CENTER EAST WALL B

Site Number:

Waste Profile No:

Lab Asystant No:

This Report is intended for the use and benefit of Waste Management and its companies. No representation concerning significance of the reported data is made to any other person or entity.

FINGERPRINT

Result

Analysis Date

No FINGERPRINT Tests Requested

COMMENTS:

No FINGERPRINT Comments

WET CHEMISTRY

Result

Unit

Analysis Date

No WET CHEMISTRY Tests Requested

COMMENTS:

No WET CHEMISTRY Comments

SPECTROSCOPY

Result

Unit

Analysis Date

No SPECTROSCOPY Tests Requested

COMMENTS:

No SPECTROSCOPY Comments

SOLID PCBS WIPE - LIMIT

AROCHLOR 1254 AROCHLOR 1242 2.74 7.04

Result

Unit

Analysis Date

ug ug

03/08/95 03/08/95

COMMENTS:

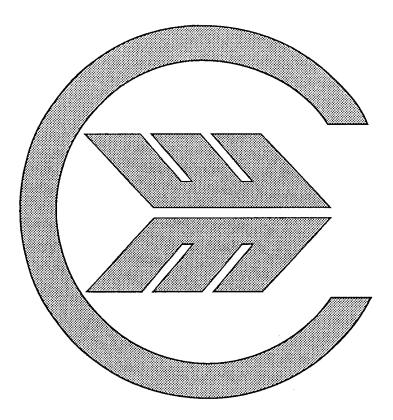
No SOLID PCBS WIPE - LIMIT Comments

This Report is intended for the use and benefit of Waste Management and its companies. No representation concerning significance of the reported data is made to any other person or entity.

CERTIFICATION: Except as explicitly noted, all analytical data reported above were obtained under my direction and supervision. For Chemical Waste Management, Inc. companies, sample preparation and analytical methods and analytical equipment specified or approved in the facility's waste analysis plan were used in conducting this analysis. This laboratory follows a quality assurance control program.

Report Date Mar 8,

Approved:



Waste Analysis Report

Chemical Waste Management - Riverdale

Sample Id:

200085967

Date Sampled:

06-MAR-95

Date Logged:

07-MAR-95

Waste Profile Number:

Source:

MIS

Generator Name:

CWM/CLEAN HARBORS

Generator Location:

CHICAGO, IL

Waste Name:

CENTER OF THE NORTH WALL

Site Number:

Waste Profile No:

Lab Asystant No:

This Report is intended for the use and benefit of Waste Management and its companies. No representation concerning significance of the reported data is made to any other person or entity.

Analysis Date Result **FINGERPRINT** No FINGERPRINT Tests Requested **COMMENTS:** No FINGERPRINT Comments **Analysis Date WET CHEMISTRY** Result Unit No WET CHEMISTRY Tests Requested **COMMENTS:** No WET CHEMISTRY Comments **Analysis Date SPECTROSCOPY** Unit Result No SPECTROSCOPY Tests Requested **COMMENTS:** No SPECTROSCOPY Comments **Analysis Date SOLID PCBS WIPE - LIMIT** Result Unit AROCHLOR 1242 .75 03/08/95 ug

COMMENTS:

No SOLID PCBS WIPE - LIMIT Comments

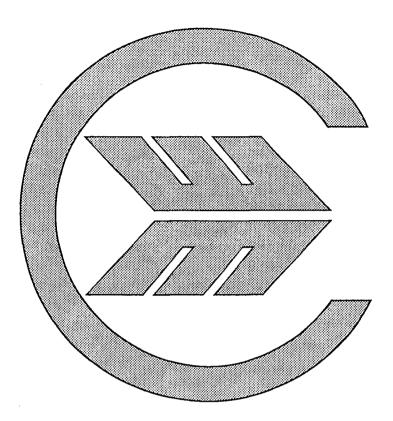
Lab Asystant No:

This Report is intended for the use and benefit of Waste Management and its companies. No representation concerning significance of the reported data is made to any other person or entity.

CERTIFICATION: Except as explicitly noted, all analytical data reported above were obtained under my direction and supervision. For Chemical Waste Management, Inc. companies, sample preparation and analytical methods and analytical equipment specified or approved in the facility's waste analysis plan were used in conducting this analysis. This laboratory follows a quality assurance control program.

Report Date Mar 8, 1995

Approved:/



Waste Analysis Report

Chemical Waste Management - Riverdale

Sample Id:

200085985

Date Sampled:

06-MAR-95

Date Logged:

07-MAR-95

Waste Profile Number:

Source:

MIS

Generator Name:

CWM/CLEAN HARBORS

Generator Location:

CHICAGO, IL

Waste Name:

ELECTRIC BOX 04434 AH

Site Number:

Waste Profile No:

Lab Asystant No:

This Report is intended for the use and benefit of Waste Management and its companies. No representation concerning significance of the reported data is made to any other person or entity.

FINGERPRINT Result **Analysis Date** No FINGERPRINT Tests Requested **COMMENTS:** No FINGERPRINT Comments Unit **WET CHEMISTRY** Result **Analysis Date** No WET CHEMISTRY Tests Requested COMMENTS: No WET CHEMISTRY Comments Result Unit **SPECTROSCOPY Analysis Date** No SPECTROSCOPY Tests Requested **COMMENTS:** No SPECTROSCOPY Comments **SOLID PCBS WIPE - LIMIT** Result Unit **Analysis Date** AROCHLOR 1242 AROCHLOR 1260 ug ug 3.76 03/08/95 03/08/95 6.6

COMMENTS:

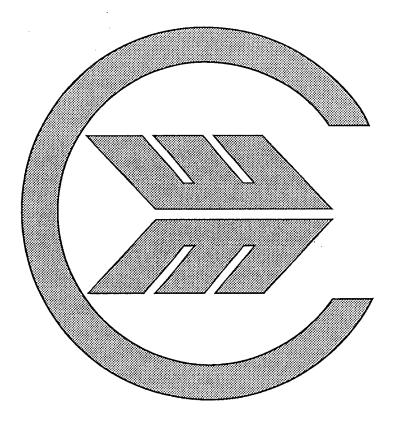
No SOLID PCBS WIPE - LIMIT Comments

This Report is intended for the use and benefit of Waste Management and its companies. No representation concerning significance of the reported data is made to any other person or entity.

CERTIFICATION: Except as explicitly noted, all analytical data reported above were obtained under my direction and supervision. For Chemical Waste Management, Inc. companies, sample preparation and analytical methods and analytical equipment specified or approved in the facility's waste analysis plan were used in conducting this analysis. This laboratory follows a quality assurance control program.

Report Date Mar 8, 1995

Approved:



Waste Analysis Report

Chemical Waste Management - Riverdale

Sample Id:

200086077

Date Sampled:

09-MAR-95

Date Logged:

09-MAR-95

Waste Profile Number:

Source:

MIS

Generator Name:

INC/CLEAN HARBORS

Generator Location:

CHICAGO, IL

Waste Name:

ELECTRIC BOX 500836

Site Number:

No SOLID PCBS WIPE - LIMIT Comments

Waste Profile No:

Lab Asystant No:

This Report is intended for the use and benefit of Waste Management and its companies. No representation concerning significance of the reported data is made to any other person or entity.

	FINGERPRINT No FINGERPRINT Tests Requested COMMENTS: No FINGERPRINT Comments	Result		Analysis Date
	WET CHEMISTRY No WET CHEMISTRY Tests Requested COMMENTS: No WET CHEMISTRY Comments	Result	Unit	Analysis Date
	SPECTROSCOPY No SPECTROSCOPY Tests Requested COMMENTS: No SPECTROSCOPY Comments	Result	Unit	Analysis Date
.,,	SOLID PCBS WIPE - LIMIT AROCHLOR 1242 AROCHLOR 1260 COMMENTS:	Result 5.26 8.78	Unit ug ug	Analysis Date 03/11/95 03/11/95

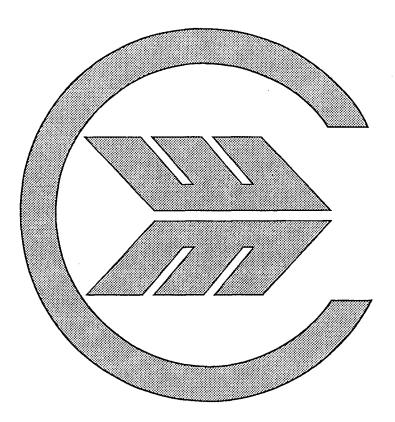
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Report Date Mar 11, 1995

Approved:

Dewey D. Hitt, Supervisor - Spectroscopy



Waste Analysis Report

Chemical Waste Management - Riverdale

Sample Id:

200085984

Date Sampled:

06-MAR-95

Date Logged:

07-MAR-95

Waste Profile Number:

Source:

MIS

Generator Name:

CWM/CLEAN HARBORS

Generator Location:

CHICAGO, IL

Waste Name:

500836 LID

Site Number:

Waste Profile No:

Lab Asystant No:

This Report is intended for the use and benefit of Waste Management and its companies. No representation concerning significance of the reported data is made to any other person or entity.

FINGERPRINT

Result

Analysis Date

No FINGERPRINT Tests Requested

COMMENTS:

No FINGERPRINT Comments

WET CHEMISTRY

Result

Unit

Analysis Date

No WET CHEMISTRY Tests Requested

COMMENTS:

No WET CHEMISTRY Comments

SPECTROSCOPY

Result

Unit

Analysis Date

No SPECTROSCOPY Tests Requested

COMMENTS:

No SPECTROSCOPY Comments

SOLID PCBS WIPE - LIMIT

18.7

Unit

Analysis Date

AROCHLOR 1242 AROCHLOR 1260

53.2

Result

ug ug 03/08/95 03/08/95

COMMENTS:

No SOLID PCBS WIPE - LIMIT Comments

Lab Asystant No:

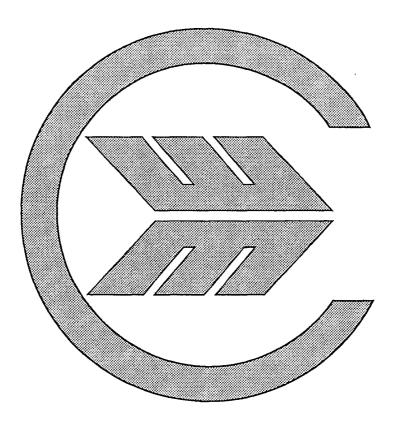
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Report Date

Mar 8, 1995

Approved:



Waste Analysis Report

Chemical Waste Management - Riverdale

Sample Id:

200085987

Date Sampled:

06-MAR-95

Date Logged:

07-MAR-95

Waste Profile Number:

Source:

MIS

Generator Name:

CWM/CLEAN HARBORS

Generator Location:

CHICAGO, IL

Waste Name:

DRUM VAC LID

Site Number:

Waste Profile No:

Lab Asystant No:

This Report is intended for the use and benefit of Waste Management and its companies. No representation concerning significance of the reported data is made to any other person or entity.

FINGERPRINT

Result

Analysis Date

No FINGERPRINT Tests Requested

COMMENTS:

No FINGERPRINT Comments

WET CHEMISTRY

Result

Unit

Analysis Date

No WET CHEMISTRY Tests Requested

COMMENTS:

No WET CHEMISTRY Comments

SPECTROSCOPY

Result

Unit

Analysis Date

No SPECTROSCOPY Tests Requested

COMMENTS:

No SPECTROSCOPY Comments

SOLID PCBS WIPE - LIMIT

Result

Unit

Analysis Date

AROCHLOR 1260 AROCHLOR 1242 13.1 4.89

ug ug 03/08/95 03/08/95

COMMENTS:

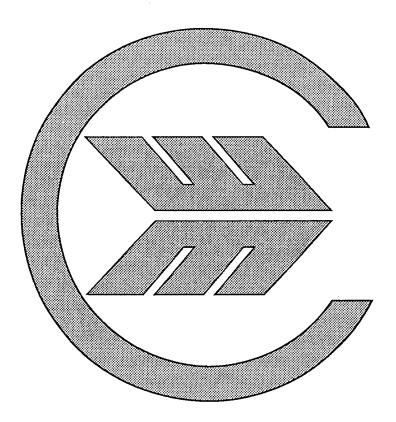
No SOLID PCBS WIPE - LIMIT Comments

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Report Date Mar 8, 19

Approved



Waste Analysis Report

Chemical Waste Management - Riverdale

Sample Id:

200086066

Date Sampled:

09-MAR-95

Date Logged:

09-MAR-95

Waste Profile Number:

Source:

MIS

Generator Name:

INC/CLEAN HARBORS

Generator Location:

CHICAGO, IL

Waste Name:

SMALL BLUE SANDPIPER

Site Number:

No SOLID PCBS WIPE - LIMIT Comments

Waste Profile No:

Lab Asystant No:

This Report is intended for the use and benefit of Waste Management and its companies. No representation concerning significance of the reported data is made to any other person or entity.

FINGERPRINT	Result		Analysis Date
No FINGERPRINT Tests Rec	quested		
COMMENTS:			
No FINGERPRINT Comment	s		
WET CHEMISTRY	Result	Unit	Analysis Date
No WET CHEMISTRY Tests	Requested		
COMMENTS:			
No WET CHEMISTRY Comr	nents		
SPECTROSCOPY	Result	Unit	Analysis Date
No SPECTROSCOPY Tests	Requested		
COMMENTS:			
No SPECTROSCOPY Comr	nents	ı	
SOLID PCBS WIPE - L	MIT Result	Unit	Analysis Date
AROCHLOR 1242 AROCHLOR 1260	3.61 7.62	ug ug	03/11/95 03/11/95
COMMENTS:			

Waste Profile No:

Lab Asystant No:

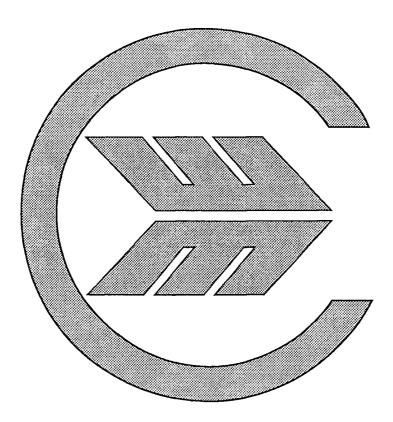
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Report Date Mar 11, 1995

Approved:

Dewey D. Hitt, Supervisor - Spectroscopy



Waste Analysis Report

Chemical Waste Management - Riverdale

Sample ld:

200086071

Date Sampled:

09-MAR-95

Date Logged:

09-MAR-95

Waste Profile Number:

Source:

MIS

Generator Name:

INC/CLEAN HARBORS

Generator Location:

CHICAGO, IL

Waste Name:

YELLOW WILDEN PUMP

Site Number:

Sample Id: 200086071 Waste Profile No:

No SOLID PCBS WIPE - LIMIT Comments

Lab Asystant No:

This Report is intended for the use and benefit of Waste Management and its companies. No representation concerning significance of the reported data is made to any other person or entity.

:	FINGERPRINT No FINGERPRINT Tests Requested COMMENTS: No FINGERPRINT Comments	Result		Analysis Date
	WET CHEMISTRY No WET CHEMISTRY Tests Requested COMMENTS: No WET CHEMISTRY Comments	Result	Unit	Analysis Date
:	SPECTROSCOPY No SPECTROSCOPY Tests Requested COMMENTS: No SPECTROSCOPY Comments	Result	Unit	Analysis Date
:	SOLID PCBS WIPE - LIMIT AROCHLOR 1260 AROCHLOR 1242 COMMENTS:	Result 18.6 9.80	Unit ug ug	Analysis Date 03/11/95 03/11/95

This Report is intended for the use and benefit of Waste Management and its companies. No representation concerning significance of the reported data is made to any other person or entity.

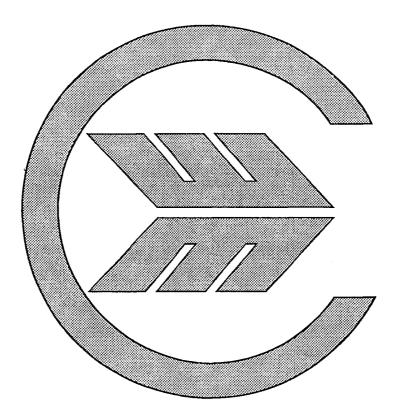
CERTIFICATION: Except as explicitly noted, all analytical data reported above were obtained under my direction and supervision. For Chemical Waste Management, Inc. companies, sample preparation and analytical methods and analytical equipment specified or approved in the facility's waste analysis plan were used in conducting this analysis. This laboratory follows a quality assurance control program.

Dewey D/ Hitt, Supervisor - Spectroscopy

Report Date Mar 11, 1995

Approved:

Page 3 of 3



Waste Analysis Report

Chemical Waste Management - Riverdale

Sample Id:

200086072

Date Sampled:

09-MAR-95

Date Logged:

09-MAR-95

Waste Profile Number:

Source:

MIS

Generator Name:

INC/CLEAN HARBORS

Generator Location:

CHICAGO, IL

Waste Name:

YELLOW WILDEN PUMP

Site Number:

Waste Profile No:

Lab Asystant No:

This Report is intended for the use and benefit of Waste Management and its companies. No representation concerning significance of the reported data is made to any other person or entity.

H				
T T T T T T T T T T	FINGERPRINT	Result		Analysis Date
	No FINGERPRINT Tests Requested			
	COMMENTS:			
	No FINGERPRINT Comments			
	WET CHEMISTRY	Result	Unit	Analysis Date
î	No WET CHEMISTRY Tests Requested			
:	COMMENTS:			
	No WET CHEMISTRY Comments			
	SPECTROSCOPY	Result	Unit	Analysis Date
1	No SPECTROSCOPY Tests Requested			
	COMMENTS:			
	No SPECTROSCOPY Comments			
	SOLID PCBS WIPE - LIMIT	Result	Unit	Analysis Date
	AROCHLOR 1242 AROCHLOR 1260	13.3 30.8	ug ug	03/11/95 03/11/95

COMMENTS:

No SOLID PCBS WIPE - LIMIT Comments

Waste Profile No:

Lab Asystant No:

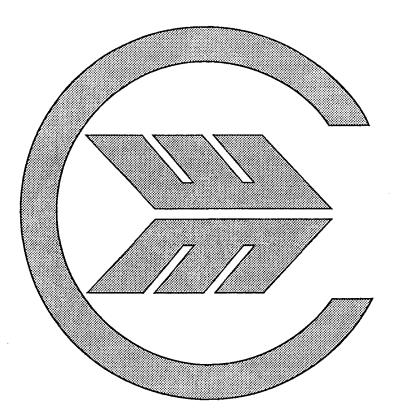
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Report Date Mar 11, 1995

Approved:

Dewey D. Hitt, Supervisor - Spectroscopy



Waste Analysis Report

Chemical Waste Management - Riverdale

Sample Id:

200086073

Date Sampled:

09-MAR-95

Date Logged:

09-MAR-95

Waste Profile Number:

Source:

MIS

Generator Name:

INC/CLEAN HARBORS

Generator Location:

CHICAGO, IL

Waste Name:

WILDEN M8 ORANGE PUMP

Site Number:

COMMENTS:

No SOLID PCBS WIPE - LIMIT Comments

Waste Profile No:

Lab Asystant No:

This Report is intended for the use and benefit of Waste Management and its companies. No representation concerning significance of the reported data is made to any other person or entity.

FINGERPRINT	Result		Analysis Date
No FINGERPRINT Tests Requested			
COMMENTS:			
No FINGERPRINT Comments			
WET CHEMISTRY	Result	Unit	Analysis Date
No WET CHEMISTRY Tests Requested			
COMMENTS:			
No WET CHEMISTRY Comments			
SPECTROSCOPY	Result	Unit	Analysis Date
No SPECTROSCOPY Tests Requested			
COMMENTS:			
No SPECTROSCOPY Comments		1	
 SOLID PCBS WIPE - LIMIT	Result	Unit	Analysis Date
AROCHLOR 1242 AROCHLOR 1260	12.1 6.72	ug ug	03/11/95 03/11/95

Waste Profile No:

Lab Asystant No:

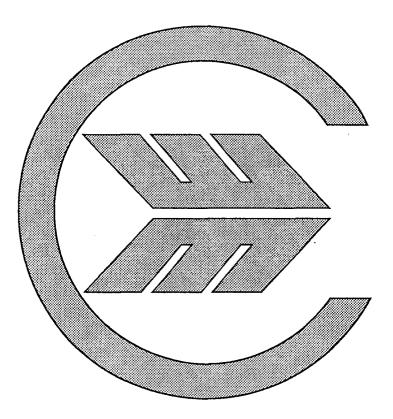
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Report Date Mar 11, 1995

Approved:

Dewey D/ Hitt, Supervisor - Spectroscopy/



Waste Analysis Report

Chemical Waste Management - Riverdale

Sample Id:

200086075

Date Sampled:

09-MAR-95

Date Logged:

09-MAR-95

Waste Profile Number:

Source:

MIS

Generator Name:

INC/CLEAN HARBORS

Generator Location:

CHICAGO, IL

Waste Name:

ELECTRIC BOX 50086

Site Number:

Waste Profile No:

Lab Asystant No:

This Report is intended for the use and benefit of Waste Management and its companies. No representation concerning significance of the reported data is made to any other person or entity.

	FINGERPRINT	Result		Analysis Date
	No FINGERPRINT Tests Requested			
	COMMENTS:			
	No FINGERPRINT Comments		•	
-	WET CHEMISTRY	Result	Unit	Analysis Date
	No WET CHEMISTRY Tests Requested			
	COMMENTS:			
	No WET CHEMISTRY Comments			
	SPECTROSCOPY	Result	Unit	Analysis Date
	No SPECTROSCOPY Tests Requested			
	COMMENTS:			
	No SPECTROSCOPY Comments			
	SOLID PCBS WIPE - LIMIT	Result	Unit	Analysis Date
	AROCHLOR 1242 AROCHLOR 1260	10.3 10.4	ug ug	03/11/95 03/11/95
	COMMENTS:			

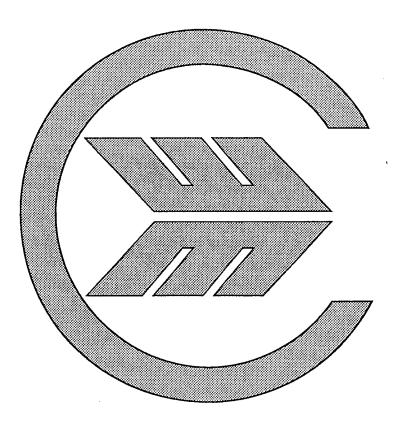
This Report is intended for the use and benefit of Waste Management and its companies. No representation concerning significance of the reported data is made to any other person or entity.

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Report Date Mar 11, 1995

Approved:

Dewey D/Hitt, Supervisor - Spectroscopy



Waste Analysis Report

Chemical Waste Management - Riverdale

Sample Id:

200086076

Date Sampled:

09-MAR-95

Date Logged:

09-MAR-95

Waste Profile Number:

Source:

MIS

Generator Name:

INC/CLEAN HARBORS

Generator Location:

CHICAGO, IL

Waste Name:

50086 BOX LID

Site Number:

No SOLID PCBS WIPE - LIMIT Comments

Waste Profile No:

Lab Asystant No:

This Report is intended for the use and benefit of Waste Management and its companies. No representation concerning significance of the reported data is made to any other person or entity.

FINGERPRINT	Result		Analysis Date
No FINGERPRINT Tests Requested			
COMMENTS:			
No FINGERPRINT Comments .			
WET CHEMISTRY	Result	Unit	Analysis Date
No WET CHEMISTRY Tests Requested			
COMMENTS:			
No WET CHEMISTRY Comments			
SPECTROSCOPY	Result	Unit	Analysis Date
No SPECTROSCOPY Tests Requested			
COMMENTS:			
No SPECTROSCOPY Comments			
SOLID PCBS WIPE - LIMIT	Result	Unit	Analysis Date
AROCHLOR 1242 AROCHLOR 1260	25.5 27.4	ug ug	03/11/95 03/11/95
COMMENTS:			

Waste Profile No:

Lab Asystant No:

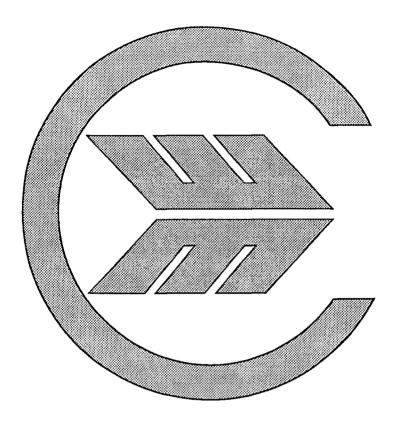
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Report Date Mar 11, 1995

Approved:

Dewey D/Hitt, Supervisor - Spectroscopy



Waste Analysis Report

Chemical Waste Management - Riverdale

Sample Id:

200086078

Date Sampled:

09-MAR-95

Date Logged:

09-MAR-95

Waste Profile Number:

Source:

MIS

Generator Name:

INC/CLEAN HARBORS

Generator Location:

CHICAGO, IL

Waste Name:

04434 BOX LID

Site Number:

Sample ld: 200086078

No SOLID PCBS WIPE - LIMIT Comments

Waste Profile No:

Lab Asystant No:

This Report is intended for the use and benefit of Waste Management and its companies. No representation concerning significance of the reported data is made to any other person or entity.

FINGERPRINT	Result		Analysis Date
No FINGERPRINT Tests Requested			
COMMENTS:			
No FINGERPRINT Comments			
WET CHEMISTRY	Result	Unit	Analysis Date
No WET CHEMISTRY Tests Requested			
COMMENTS:			
No WET CHEMISTRY Comments			
SPECTROSCOPY	Result	Unit	Analysis Date
No SPECTROSCOPY Tests Requested			
COMMENTS:			
No SPECTROSCOPY Comments		, , , , , , , , , , , , , , , , , , ,	
SOLID PCBS WIPE - LIMIT	Result	Unit	Analysis Date
AROCHLOR 1260 AROCHLOR 1242	12.8 6.93	ug ug	03/11/95 03/11/95
COMMENTS:			

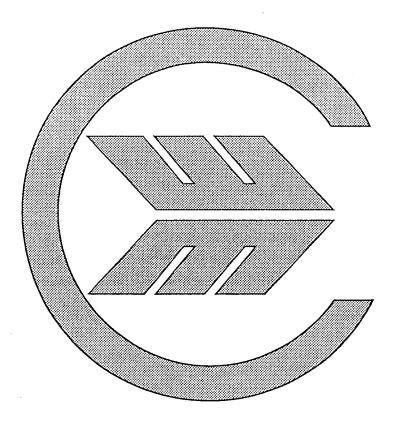
This Report is intended for the use and benefit of Waste Management and its companies. No representation concerning significance of the reported data is made to any other person or entity.

CERTIFICATION: Except as explicitly noted, all analytical data reported above were obtained under my direction and supervision. For Chemical Waste Management, Inc. companies, sample preparation and analytical methods and analytical equipment specified or approved in the facility's waste analysis plan were used in conducting this analysis. This laboratory follows a quality assurance control program.

Report Date Mar 11, 1995

Approved:

Dewey D. Hitt, Supervisor - Spectroscopy



Waste Analysis Report

Chemical Waste Management - Riverdale

Sample Id:

200086169

Date Sampled:

14-MAR-95

Date Logged:

14-MAR-95

Waste Profile Number:

Source:

MIS

Generator Name:

INC/CLEAN HARBORS

Generator Location:

CHICAGO, IL

Waste Name:

ORANGE WILDWN

Site Number:

No SOLID PCBS WIPE - LIMIT Comments

Waste Profile No:

Lab Asystant No:

This Report is intended for the use and benefit of Waste Management and its companies. No representation concerning significance of the reported data is made to any other person or entity.

	FINGERPRINT	Result		Analysis Date
. '	No FINGERPRINT Tests Requested			
	COMMENTS:			
	No FINGERPRINT Comments			
	WET CHEMISTRY	Result	Unit	Analysis Date
	No WET CHEMISTRY Tests Requested			
	COMMENTS:			
	No WET CHEMISTRY Comments			
· ——	SPECTROSCOPY	Result	Unit	Analysis Date
	No SPECTROSCOPY Tests Requested			
	COMMENTS:			
	No SPECTROSCOPY Comments			
:	SOLID PCBS WIPE - LIMIT	Result	Unit	Analysis Date
	AROCHLOR 1242 AROCHLOR 1260	18.5 32.7	ug ug	03/15/95 03/15/95
	COMMENTS:			

This Report is intended for the use and benefit of Waste Management and its companies. No representation concerning significance of the reported data is made to any other person or entity.

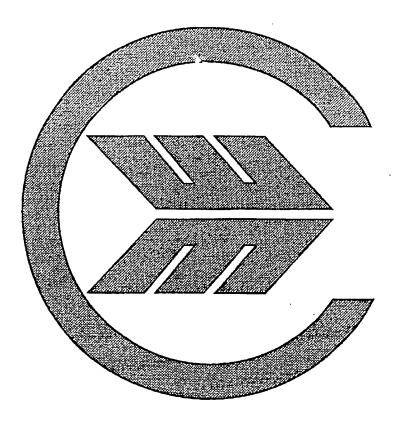
CERTIFICATION: Except as explicitly noted, all analytical data reported above were obtained under my direction and supervision. For Chemical Waste Management, Inc. companies, sample preparation and analytical methods and analytical equipment specified or approved in the facility's waste analysis plan were used in conducting this analysis. This laboratory follows a quality assurance control program.

Report Date Mar 15, 1995

Approved:

Sample Id: 200086169

James E. Curlett, Supervisor - Organic Chemistry



Waste Analysis Report

Chemical Waste Management - Riverdale

Sample Id:

200086325

Date Sampled:

21-MAR-95

Date Logged:

21-MAR-95

Waste Profile Number:

Source:

MIS

Generator Name:

INC/CLEAN HARBORS

Generator Location:

CHICAGO, IL

Waste Name:

ORANGE WILDEN PUMP

Site Number:

No SOLID PCBS WIPE - LIMIT Comments

This Report is intended for the use and benefit of Waste Management and its companies. No representation concerning significance of the reported data is made to any other person or entity.

FINGERPRINT	Result		Analysis Date
No FINGERPRINT Tests Requested			
COMMENTS:			
No FINGERPRINT Comments			
WET CHEMISTRY	Result	Unit	Analysis Date
No WET CHEMISTRY Tests Requested			
COMMENTS:			
No WET CHEMISTRY Comments			
SPECTROSCOPY	Result	Unit	Analysis Dat
No SPECTROSCOPY Tests Requested			
COMMENTS:			
No SPECTROSCOPY Comments		•	
SOLID PCBS WIPE - LIMIT	Result	Unit	Analysis Dat
AROCHLOR 1260 AROCHLOR 1242	4.64 6.75	ug ug	03/21/95 03/21/95
COMMENTS:			

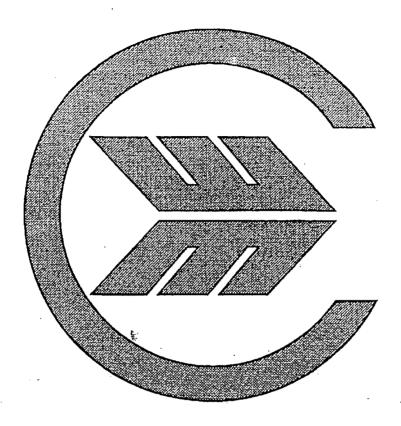
This Report is intended for the use and benefit of Waste Management and its companies. No representation concerning significance of the reported data is made to any other person or entity.

CERTIFICATION: Except as explicitly noted, all analytical data reported above were obtained under my direction and supervision. For Chemical Waste Management, Inc. companies, sample preparation and analytical methods and analytical equipment specified or approved in the facility's waste analysis plan were used in conducting this analysis. This laboratory follows a quality assurance control program.

Report Date

Approved:

ar W. Arlabruster, Asst Laboratory Manager



Waste Analysis Report

Chemical Waste Management - Riverdale

Sample Id:

200086326

Date Sampled:

21-MAR-95

Date Logged:

21-MAR-95

Waste Profile Number:

Source:

MIS

Generator Name:

INC/CLEAN HARBORS

Generator Location:

CHICAGO, IL

Waste Name:

BLUE SANDPIPER

Site Number:

No SOLID PCBS WIPE - LIMIT Comments

Waste Profile No:

Lab Asystant No:

This Report is intended for the use and benefit of Waste Management and its companies. No representation concerning significance of the reported data is made to any other person or entity.

FINGERPRINT	Result		Analysis Date
No FINGERPRINT Tests Requested			
COMMENTS:			
No FINGERPRINT Comments			
WET CHEMISTRY	Result	Unit	Analysis Date
No WET CHEMISTRY Tests Requested			
COMMENTS:			
No WET CHEMISTRY Comments			
SPECTROSCOPY	Result	Unit	Analysis Date
No SPECTROSCOPY Tests Requested			
COMMENTS:			
No SPECTROSCOPY Comments			
SOLID PCBS WIPE - LIMIT	Result	Unit	Analysis Date
AROCHLOR 1260 AROCHLOR 1242	48.0 9.97	ug ug	03/21/95 03/21/95
COMMENTS:			

Waste Profile No:

Lab Asystant No:

This Report is intended for the use and benefit of Waste Management and its companies. No representation concerning significance of the reported data is made to any other person or entity.

CERTIFICATION: Except as explicitly noted, all analytical data reported above were obtained under my direction and supervision. For Chemical Waste Management, Inc. companies, sample preparation and analytical methods and analytical equipment specified or approved in the facility's waste analysis plan were used in conducting this analysis. This laboratory follows a quality assurance control program.

Report Date Mar 21, 19

APPENDIX D

DISPOSAL DATA

5- 3-95 : 3:06PM ; CHEM WASTE PT. ARTHUR→

SENT BY:

312 646 2138;# 2/ 2 LUXECT 5/4/95 1 725m

IEMICAL WASTE MANAGEMENT

-ederal EPA ID: TXD00838896

tate EPA ID: 50212-001

nighway 73

PORT ARTHUR,, TX 77643

409) 736-2821

CHEMICAL WASTE MGMT INC ITN: MANIFEST SECTION LD000672121 11700 S STONY ISLAND AVE CHICAGO IL 60617-7250

CERTIFICATE OF DESTRUCTION

nemical Waste Management, Inc. has received waste material from theMICAL WASTE MGMT INC on 04/06/95 as described on [State Manifest or Uniform] Hazardous Waste Manifest number 0000907421 Sequence number 01. nemical Waste Management, Inc., hereby certifies that the above scribed material was incinerated and thereby destroyed in accordance with the 40 CFR part 761 as it pertains to the incineration of F 'y-Chlorinated Biphenyl contaminated materials.

Profile Number: AD2138 CWM Tracking ID: 52108801

Process: PCB INCINERATION

reatment Date: 04/23/95

der civil and criminal penalties of law for the making or submission false or fraudulent statements or representations (18 U.S.C 1001 and 15 U.S.C. 2615) I certify that the information contained in or accompanying this document is true accurate and complete. As to the i entified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct i structions, made the verification that this information is true a curate and complete.

C rtificate # 8969 04/27/95

**:XAS NATURAL RESOURCE CONSERVATION COMMISSION P.O. Box 13087

ıstin, Texas 78711-3087

3005

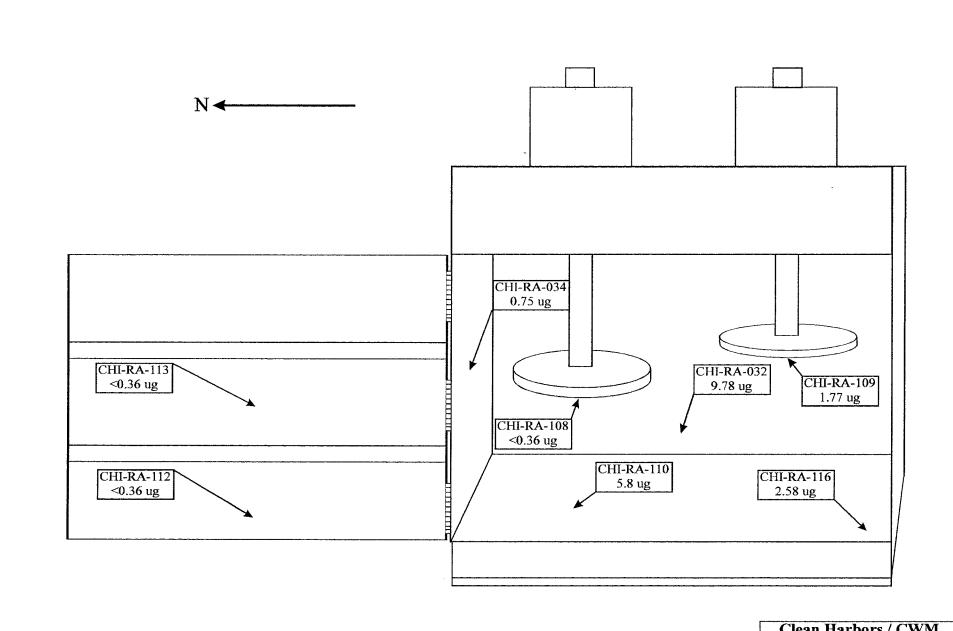


DECEIVED

UNIFORM MAZARDOUS WASTE MANIFEST I. D. 0. 0. 6, 7, 2. 1. 2. 1, 10000000000000000000000000000000000	3 4 5 F 7	WASTE MANIFEST 3. Generator's Name and Mailing Address CWM Chemical Services, 11700 S. Stony Island Ar Chicago, IL 60617 4. Generator's Phone (312) 646-576 5. Transporter 1 Company Name ENVIRONMENTAL TRANSPORTATI 7. Transporter 2 Company Name 9. Designated Facility Name and Site Addres Chemical Waste Manageme Hwy. 73, 3.5 Miles West Port Arthur, TX 77640 11A. 11. US DOT Description (including P Number) a. RQ Hazardous Waste	Inc. venue ON SERVICE 8 st., Inc. of Taylors	US EPA US EPA US EPA US EPA US EPA US EPA	1 D Number 1 6 0 5	ngent Ng 9 2 6 1 2 3 6 3	Of ART B. Sta IL- C. Sta D. Tra E. Sta	is not is	require ument N D ID IL e (40	Number) 9 0 7 4 2 1 TX-99917 -1859 TX-4004 0 5) 677-8781
3. Generator's Name and Maline Adorsus CMN Chemical Services, Inc. 11700 S. Stony Inland Avenue Chicago, IL 60617 4. Generator's Promat 312.1 646–5700 8. US EPA ID Number ENVIRONMENTAL TRANSPORTATION SERVICE 0 K D 9 3.1 6.0.5 3 6.3 D. Transporter's Prince (405) 677–8781. 7. Transporter 2 Company Name ENVIRONMENTAL TRANSPORTATION SERVICE 0 K D 9 3.1 6.0.5 3 6.3 D. Transporter's Prince (405) 677–8781. 7. Transporter 2 Company Name ENVIRONMENTAL TRANSPORTATION SERVICE 0 K D 9 3.1 6.0.5 3 6.3 D. Transporter's Prince (405) 677–8781. 7. Transporter 2 Company Name ENVIRONMENTAL TRANSPORTATION SERVICE 0 K D 9 3.1 6.0.5 3 6.3 D. Transporter's Prince (405) 677–8781. 7. Transporter 2 Company Name ENVIRONMENTAL TRANSPORTATION SERVICE 0 K D 9 3.1 6.0.5 3 6.3 D. Transporter's Prince (405) 677–8781. 7. Transporter 2 Company Name ENVIRONMENTAL TRANSPORTATION SERVICE 0 K D 9 3.6 0.5 3 6.3 D. Transporter's Prince (405) 677–8781. 7. Transporter 2 Company Name ENVIRONMENTAL TRANSPORTATION SERVICE 0 K D 9 9 7. Transporter's Prince (405) 677–8781. 7. Transporter 2 Company Name ENVIRONMENTAL TRANSPORTATION SERVICE 0 K D 9 9 7. Transporter's Prince (405) 677–8781. 7. Transporter 2 Company Name ENVIRONMENTAL TRANSPORTATION SERVICE 0 K D 9 9 7. Transporter's Prince (405) 677–8781. 7. Transporter 2 Company Name ENVIRONMENTAL TRANSPORTATION SERVICE 0 K D 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	4 5 E 7	CWM Chemical Services, 11700 S. Stony Island Av Chicago, IL 60617 4. Generator's Phone (312) 646-579 5. Transporter 1 Company Name ENVIRONMENTAL TRANSPORTATI 7. Transporter 2 Company Name 9. Designated Facility Name and Site Addres Chemical Waste Manageme Hwy. 73, 3.5 Miles West Port Arthur, TX 77640 11A. 11. US DOT Description (including P Number) a. RQ Hazardous Waste	Inc. venue ON SERVICE C 8 st. Inc. of Taylors	. US EPA). K. D. 9. 3 . US EPA 0. US EPA Bayou	ID Number 1 6 0 5 ID Number	3. 6. 3	B. Sta IL-C C. Sta D. Tra E. Sta	MENT Ite Generator's I 0316000058 Ite Transporter's Insporter's Phon Ite Transporter's	O (D ID IL e (40	1907421 TX-99917 -1859 TX-40040 5) 677-8781
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J. Additional Descriptions for Materials Listed Above a. AD2138 - PCB Leam Water (RCRA/TSCA) B. Designated Facility Name and Site Address Chemical Waste Management. Inc. Hwy. 73, 3.5 Miles West of Taylors Bayou Port Arthur, TX 77640 T X D O O O 8 3 8 8 9 6 GState Facility 2012-001 HH-Facility Phone (409) 736-282137 11A. 11. US DOT Description (including Proper Shipping Name, Hazard Class, and 10 12. Completes) Windley Dots X 9, NA3082, PG III (FO01, PCB) AD2138 O O I T T 17 O 5 9 KG FO01, PCB B. Descriptions for Materials Listed Above a. AD2138 - PCB Leam Water (RCRA/TSCA) Rainwater Out of Service Date: 3/17/95 PCB 50 ppm See Attached Land Disposal Notification/Certification Form for Additional Codes 15. Spocal Handing Institutions and Additional Information In the event of an emergency, contact: 1-800-765-8713 Certificate of Destruction Request W.O.# 204733 Del. Date: 4/06/95 Trailer : 3005 16. CENERGYOS CERTIFICATION. Interest dear that the contents of the configuration are large ownerly generator. I contributed one one make regulations. If I am a large ownerly generator. I contributed one one make an advanced to program in page to reduce the volume and toxicity of waste generation and Additional and Analonal programment regulations. Industry because and the three secretary personal programment regulators. Industry the configuration and and national programment regulators. Industry the program in page to reduce the volume and toxicity of waste generation and electric the between the programment page to reduce the regulations. The program is paged to the configuration of the program in page to reduce the volume and toxicity of waste generation and select the between the programment of paged to the page three determined to be confirmedly practicated and that these selectors in page and the member of the page and the page of the determined to be confirmedly practicated and that the selector of the page and the confirmed of the page and toxicity of waste generation and electric the between the page an	9	7. Transporter 2 Company Name 9. Designated Facility Name and Site Address Chemical Waste Manageme Hwy. 73, 3.5 Miles West Port Arthur, TX 77640 11A. 11. US DOT Description (including P Number) a. RQ Hazardous Waste	ss 1 nt, Inc. of Taylors	US EPA US EPA US EPA Bayou	ID Number		E. Sta	ite Transporter's		
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Special paragraph Special plane and Site Address 10. USEPA ID Number Chemical Master Management. Inc. Hay. 73, 3.5 Miles West of Taylors Bayou T.X.D. 0.0.0, 8.3 8.8.9 H. Facility's Phone (409) 736-2821-7. H. Facility's Phone (409) 736		Chemical Waste Manageme Hwy. 73, 3.5 Miles West Port Arthur, TX 77640 11A. 11. US DOT Description (including P Number) a. RQ Hazardous Waste	nt, Inc. of Taylors	Bayou	ID Number				0	
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Mo. Type Owner, waste No. Type Owner, waste No. Type Owner, No		HM Number) a. RQ Hazardous Waste	roner Shipping Nan	$C_{i} X_{i} D_{i} O_{i} O_{i}$	0, 8, 3, 8	8, 9, 6	,	(409) 73	36–28	21
X 9, NA3082, PG III (F001, PCB) AD2138 0 0.1 TT1 7 0.5 9 KG F001, PCB b. J. Additional Descriptions for Materials Listed Above a. AD2138 - PCB Lean Water (RCRA/TSCA) Rainwater Out of Service Date: 3/17/95 PCB 50 ppm See Attached Land Disposal Notification/Certification Form for Additional Codes 15. Special Handling Instructions and Additional Information In the event of an emergency, contact: 1-800-765-8713 Certificate of Destruction Reques W.O.#: 204733 Del.Date: 4/06/95 Trailer #: 3005 16. GENERATOR'S CERTIFICATION: Intergulations. If I an alterequently generator, lostly that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and toture threat to human beatman and seried the best waste management method mais is available to me and that I can allow Printed/Typed Name Signature Month Day Year		1	oper empping run	ne, Hazard Clas	s, and ID			Total	Unit	Late Market and the second
A Additional Descriptions for Materials Listed Above a. AD2138 — PCB Lean Water (RCRA/TSCA) Rainwater Out of Service Date: 3/17/95 PCB 50 ppm See Attached Land Disposal Notification/Certification Form for Additional Codes 15. Special Handling Instructions and Additional Information In the event of an emergency, contact: 1-800-765-8713 Certificate of Destruction Reques: W.O.#: 204733 Del. Date: 4/06/95 Trailer #: 3005 16. GENERATORS CERTIFICATION: Thereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled and are in all respects in proper condition for transport by highway according to applicable international and rational government regulations, including applicable state regulations. If I am a large quenthy generator, I carrily that I have a program in place to reduce the volume and backly and accurately described to the degree I have determined to be excomonically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and full related to the state equations of the present and that the excellent the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and the test waste maragement method that is a vailable to me and that I can afford. Printed/Typed Name Paul R. Pennock In Transporter 2 Acknowledgement of Receipt of Materials Frinted/Typed Name Month Day Year	'.	1	Liquid, N.O.	S. (F001,	F002)			0 4 5 0 0	G	TWC#OUTS102H
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d. J. Additional Descriptions for Materials Listed Above a. AD2138 - PCB Lean Water (RCRA/TSCA) Rainwater Out of Service Date: 3/17/95 PCB 50 ppm See Attached Land Disposal Notification/Certification Form for Additional Codes 15. Special Handling Instructions and Additional Information In the event of an emergency, contact: 1-800-765-8713 Certificate of Destruction Reques W.O.#: 204733 Del. Date: 4/06/95 Trailer #: 3005 16. GENERATOR'S CERTIFICATION: I herety declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations. If I am a large quently that I have a program in piace to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment. OR, if I am a small quantity generator. I have made a good laith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford. Printed/Typed Name Paul R. Pennock 17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name Signature Month Day Year Month Day Year Month Day Year Month Day Year Printed/Typed Name Signature Month Day Year	E	b.								water to the control of the control
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APPENDIX E

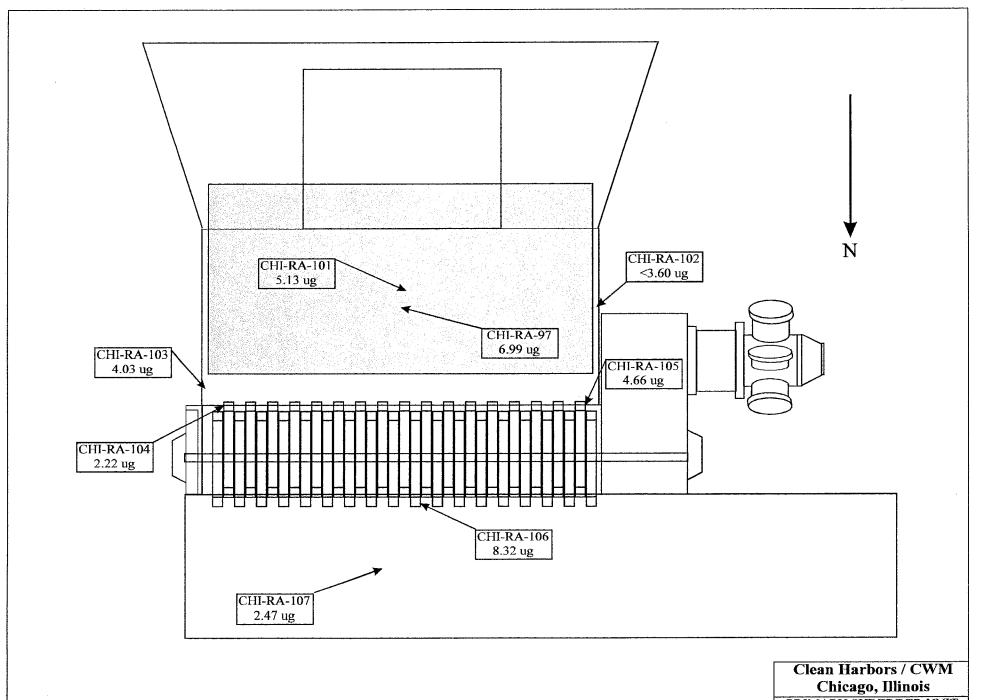
SCHEMATIC DIAGRAMS



Clean Harbors / CWM

Chicago, Illinois
DRUM CRUSHER UNIT
(PCB level in ug/100 sq em).
VECTOR GROUP, INC.

NOT TO SCALE



PRIMARY SHREDDER UNIT (PCB level in ug/100 sq cm). VECTOR GROUP, INC.

NOT TO SCALE

